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UNIVERSITY OF ALBERTA

# PLANNED PATHWAYS FROM SCHOOL TO EMPLOYMENT: AN ALBERTA PERSPECTIVE

BY

NINA MERLE POWLETTE

©

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH

IN PARTIAL FULFILLMENT OF THE REQUIREMENT

FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

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This thesis is dedicated to the memory of four special people to whom much is owed:

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## ABSTRACT

This exploratory study was designed to investigate a number of factors thought to be influential in helping high school students through the transition process from school to employment and also from school to further education. A review of the relevant research literature showed that no such comprehensive study involving the cluster of variables investigated in this study had been conducted.

The variables of interest thought to influence later career and further education decisions included the influence of grades, knowledge of the job situation, and the extent of the student's participation in school and leisure activities. The influence of gender, attitude, significant other, and home conditions and the educational program completed also were considered in the investigation.

Subjects of the study consisted of 1,047 Grade 11 public school students in the Province of Alberta. Females and males were 49.7 percent and 47.8 percent respectively. Twenty-seven (2.5%) did not identify their gender.

The instrument used in this study was an 89-item questionnaire called "Youth Transition from School to Employment and/or Further Education: An Alberta Perspective" specially designed and validated by the researcher and used to measure the variables of interest in the study.

Analysis of the data consisted of two phases. Data from the questionnaire were first analyzed and discussed with reference to percentages. Chi-square analysis was then used to test the significance of observed differences. Results were further discussed relative to the significant impact of the variables.

Data analysis revealed that there were significant relationships between the planned pathways and the variables of work knowledge, educational program

enrolled in, grades, extracurricular and leisure activities, significant other, gender, and home situation. Further, the data analysis revealed that there were significant relationships between gender and the variables of hours of part-time work per week, length of working part-time, reason for working part-time, leisure and extracurricular activities, future lifestyle, educational program enrolled in, parental agrement/disagreement with students plans and home situation.

The results of the study are discussed with reference to the variables investigated and how significantly they relate to later decisions about employment and further studies. Implications for further research and practice are also discussed.

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# Chapter I

## BACKGROUND AND PROBLEM STATEMENT

### A. Introduction

The range, magnitude, and intensity of the problems currently facing parents, educators, and others involved in preparing young people to become effective, self-fulfilled, contributing members of society are well documented. One area in particular which is of concern to policymakers and society in general is the transition from school to work. Studies of the transition from school to work generally focus on the process whereby youth move into the world of work (Ashton & Lowe, 1991; Kerckhoff, 1990; Krahn, 1988; Mason, 1985; Dowsett, 1990; Sharpe & Spain, 1991).

During this difficult period for young people, decisions have to be made which sometimes seem to be irrevocable. Aspirations and reality have to be reconciled. A pattern of adult life is being initiated through formal and informal learning in situations that include communicating with adults and peers in new situations (Hogan & Astone, 1986). It is always difficult to make choices that will have long-term implications; yet, in adolescence, choices have to be made about academic subjects to be studied, courses to be taken, training and qualifications to be gained, a career to follow, and whether to work for others or for oneself. As well, decisions must be made about the advice offered by parents, teachers, counsellors, and peers.

Although a number of difficulties are experienced by adolescents and young adults, impediments and decisions related to the achievement of satisfying and meaningful work are very important to human development.

Morris (1969) summarizes:

> Work has many different meanings for man. The presence or absence of it is perhaps the most important pivot point in a human's life. A man spends his early life preparing for his work, the major section of his life, doing his chosen work, and the last part of his life, retired from his work (p. 1).

Many studies have been done on many facets of work and its relationship to man. Ginzberg et al. (1951), Maslow (1954), Roe (1956), Super (1957), and Holland (1973) have written of the need for work, the satisfactions obtained from work, the process of choosing a career, the problems associated with indecision and poor choice, and the difficulties experienced as a consequence of poor or inadequate career planning.

How do young people make the transition from school to employment and/or further education? Do students have career plans? Is choice of a career a point-in-time phenomenon or a sequence of decisions that evolve over time? What variables, for example, parental influence, affect choice of career pathway? How do young people become knowledgeable about work? What are the effects of resource materials, leisure activities, and part-time employment?

It is well documented that Canadian youth have concerns and problems in career planning and career decision making. The instructor's manual for *Creating a Career* (Manpower & Immigration 1976) states:

> During high school years, young people are expected to formulate career goals. They are also expected to evidence commitment to these goals by either taking further education and training or by taking an entry level job upon leaving school. Despite such societal expectations though, young people who are not certain about their occupational futures constitute a significant group (p. i).

According to Statistics Canada, as quoted in the Conference Board Report, the secondary school dropout rate in Alberta for the academic year 1988-89 was 36.8 percent. This figure was 2.1 percent higher than the national secondary

school dropout rate (Lafleur, 1992, pp. 3-4). Many students who have skipped several classes attempt to complete high school but find that they do not have the ability or the motivation to keep up with their peers. They soon realize that missing classes has a snowball effect and that dropping out is, like education itself, a cumulative process.

Generally, a large percentage of individuals complete their formal education when they leave high school, some with and some without a diploma. Like their college-bound peers, those without diplomas aspire to succeed by finding a niche in the work place that will enable them to make a living and a personal impact in their world.

Career paths are also influenced by educational experiences, by environment, and by personal social factors. An important factor in determining career goals is whether job opportunities in the labour market match individual perceptions of those opportunities.

Therefore, it is imperative that appropriate career education and career planning be guided by an understanding of career development and career decision-making processes. Specifically, fundamental issues surrounding choices and decisions must be clearly addressed if the transition from school to employment is to be a constructive process.

The transition from school to the labour force is often complicated. While some youths have well developed plans and have decided to proceed directly into the labour force, others may go into post-secondary education as an intermediate step. There are others whose plans are so poorly formed that they could be said to be nonexistent (Gordon, 1978). Several frameworks have been put forward in attempts to describe and to explain the development of career pathways. Although limited empirical support is currently available to validate their explanatory power, these developmental (Gottfredson, (1981), psychological (Holland, 1985), and

sociological/status attainment (Cuneo & Curtis, 1975) frameworks identify numerous variables that should be considered in efforts to elaborate on the choice of career pathways. These include parental influence and support of a youth's educational and/or occupational choices; background characteristics of the family such as parents' social class, level of educational attainment, and occupation; personal orientations of youth, such as vocational interests and perceptions, and knowledge of work and self; educational decisions, that is, high school program, course selections, and intended post-secondary major; and gender.

In order to find out how Alberta youth prepare for and make the transition from school to employment and/or further education, a survey was conducted with Grade 11 students in the Province of Alberta.

**B. The Research Problem**

To investigate the social, psychological, and economic variables which influence the career decisions of youth and to identify the variables which play a significant role in the transition from school to employment and/or further education.

**C. The Research Question**

The present investigation was exploratory. It sought a better understanding of how the youth of Alberta are influenced by various factors in the transition from school to employment and/or further education. The specific questions that guided the study and analysis of the data are:

1. What are the career and further education plans of Alberta youth?
2. How extensive and how realistic is their knowledge of the labour market?
3. What are youths' attitudes towards employment?

4. What are their job expectations?
5. What internal factors - those which exist within the school setting - are influencing youths' choice of career?
6. What external factors - those which exist outside the school setting - are influencing youths' choice of career?
7. What is the process through which youths select a career?

**D. Significance of the Study**

The present investigation occurs at a time of reduced opportunities for youth in pursuit of employment directly after high school graduation, along with an uncertainty about the benefits of further education, and increased interest by researchers, educators, and government institutions. The interest is generated out of social, economic, and political concerns for this group during a specific transition phase in the life cycle and for the nation as a whole, since their collective decisions and actions ultimately will have long-term consequences.

The investigation addresses practical and theoretical questions in an attempt to understand better how particular social structures and/or processes facilitate or frustrate the realization of further education or job attainment. The nature and timing of this research are significant. The factors that facilitate or frustrate the transition process are examined and the findings may provide information which career consultants might use to help youth make a more effective transition to the labour force.

Thus the central questions which this investigation is designed to answer are as follows: What are the general factors influencing the choice of a career? How significant are some of those factors in the transition from school to employment and/or further education?

A review of the relevant literature indicates that no such study of a group of

factors affecting choice of career has been attempted in Alberta, although a number of large-scale studies have been done in Europe, (e.g., Commission of European Communities, 1984); Australia ( e.g., Anderson & Blakers, (1983); Carpenter & Western, 1982); the United States (e.g., Sewell & Hauser, 1975; Stafford, Lundstedt, & Lynn, 1984, Feichtner, 1989); and in Canada (Anisef, 1974; Anisef & Axelrod, 1993, Porter, Porter, & Blishen, 1982; Davis, 1985; Lam, 1982; Novek, 1985; Department of Secretary of State, 1990; Sharpe & Spain, 1991; Krahn & Lowe, 1993).

In Alberta a few studies have investigated individual variables, for example, Froese (1993) studied students in an Edmonton high school who had part-time jobs; Snook & Cusworth, (1985) analyzed career counselling at junior and senior high schools in Red Deer and Three Hills; Paproski, (1990) focused on career decision making with native and non-native students in Edmonton Catholic schools; Keyote (197l) studied post-secondary educational plans in a rural public high school; Kansup (1977) investigated the perceptions of occupational characteristics of grade nine students in two junior high schools in Edmonton; Mott (1975) studied indecision vs. indecisiveness in three social science classes in Edmonton; Krahn and Lowe (1991) did research on young workers in the service sector and also (1993) the school to work transition of high school and university students in Edmonton. While Collett's (1981) study of monitoring an educational system has implications for programs which indirectly have an impact on transition, it did not specifically address the problem of transition from school to employment. As a consequence, this study was designed to investigate how youth in the Province of Alberta make the transition from school to employment and/or further education by investigating the relationship of critical variables such as career choice, knowledge of occupations, work experience, attitude towards employment, and influences on career decision.

This study should assist educators, policy planners, and youth in making decisions about the transition from school to employment and/or further education.

**E. Limitations**

Generalizations of this study's findings should be interpreted with caution. The instrument used to collect data is self-administered. It is possible that certain items on the questionnaire may not be responded to in a truthful manner.

Only selected items on the questionnaire were analyzed. The item dealing with respondents home situations was limited to five categories; however, there are many more home situations, for exmple, step-mother, guardian, etc.

An issue that required serious consideration in conducting this investigation pertained to the format utilized. While Tuckman (1978) believes more benefits and enhanced reliability accrue from the questionnaire approach used in this study in comparison with oral interview techniques, certain limitations are evident in both approaches. The addition of a series of oral interviews with even a few students would have improved this study by providing clarity and expanded awareness of career factors.

The sample population is delimited to the Province of Alberta, Canada. Results of this study may not be generalizable to other regions of Canada.

As a result of these limitations, the conclusions drawn from the data should be viewed cautiously in terms of possible generalization. Yet the reported findings are important and should not be marginalized.

**F. Definition of Terms**

For the purpose of this study the following definitions of terms are provided:

Vocational Education

Vocational education, according to Glendenning (1964), "entails specific preparation for and participation in gainful employment in an occupation of social value" (pp. 14-15).

Another author, Baker, cited in Young (1992), captures the essence when he states that vocational education "should provide each individual with the opportunity of resolving for himself such questions as what work is, its physical and spiritual significance to him, its significance for society at large and its relationship to recreation and leisure" (p. 1).

Transition

A process of personal growth and development from school to employment and/or further education.

Youth

Youth and young people are used interchangeably in this study and refer to persons 15 to 19 years of age. This is a variation on the broad category for youth (15 to 24) years of age used in the Canadian Government's 1981 census. (Statistics Canada, 1984, p. 10)

Career

The definition for career provided by Hoyt et al. (1974) was adopted for use in this study. These authors define career as "the totality of work one does in his or her lifetime" (p. 18). They point out that the terms "job," "occupation," and "vocation" denote components of a career.

Magnum et al. (1975) provide additional support for this definition by recognizing that a career is the totality of what one accomplishes during a lifetime of efforts. These authors go on to state that the efforts may be paid or unpaid and provide goods and services for the benefit of oneself and others. (p. 8)

Occupation

For the purpose of this study, the term occupation was taken from the

*National Occupation Classification of Index and Titles* (Employment and Immigration Canada, 1993), which states that the term occupation "is used to refer to a number of jobs that have the same basic work content, even though they may be found in a number of different establishments or industries". (p. xv)

Attitudes and Opinions

A review of the literature in educational psychology indicated a fine distinction between the terms attitudes and opinions. Hennessy (1965) states:

> Attitudes are tendencies or dispositions, learned rather than inborn, towards objects, persons, or groups; these tendencies or dispositions are not specific to any particular set of facts or particular policy questions, but apply generally towards the objects, persons, or groups to which they relate. Opinions may be thought of as sharpened attitudes, specific to certain real objects, persons or groups. (p. 186)

Berelson & Janowitz, (1966) concur with the definitions provided by Hennessy by stating that:

> Attitude is the predisposition of the individual to evaluate some symbol or object or aspect of his world in a favourable or unfavourable manner. Opinion is the verbal expression of an attitude, but attitudes can also be expressed in nonverbal behaviour. Attitudes include both the effective, or feeling core of liking or disliking, and the cognitive, or belief elements which describe the object of the attitude, its characteristics, and its relation to other objects. (p. 55)

Hennessy further points out that the literature on opinion and attitude studies indicate that opinion is always consistent with attitude, barring lies and views stated under duress. As long as this is pointed out, it is conceptually proper and operationally satisfactory to assume that attitudes and opinions are consistent.

For the purpose of this study, the above definitions have been accepted.

**G. Organization of the Study**

This study can best be characterized as a descriptive survey with a substantial analytical component which looks at the process by which Alberta youth make the transition from school to employment and/or further education.

Chapter I outlines the background and significance of the problem. Also included in this chapter are the research questions, the limitations of the study, and the definitions of terms used in the study.

Chapter II reviews literature relevant to transition problems and programs. It includes theories of vocational choice, occupational choice, labour market trends, and barriers to transition.

Chapter III describes the design of the study. It contains explanations of the subjects, development of the instrument, procedures for collecting data, and descriptions of the statistical methods used to analyze the data.

Chapter IV presents the data, the results of the study and discussion of the findings.

Chapter V consists of the summary of the study, its implications, and suggestions for further research.

# Chapter II

# REVIEW OF RELATED LITERATURE

## A. Introduction

This chapter contains a review of the pertinent literature and is organized as follows:

1. Related Studies.
2. Theories of vocational choice.
3. Labour market trends in Canada and Alberta.

## B. Related Studies

A review of the literature shows that no studies have been done involving surveys of youth before and after their transition to the work force in Alberta, with the exception of Collett (1981) and Krahn and Lowe (1991). Collett's longitudinal study of Grade 11 students was to identify variables which could be used within an evaluation system to monitor quality of education in ongoing school programs in Alberta. Two follow-up surveys were conducted two years (1973) and five years (1977) after students completed Grade 11. The study concluded that macro evaluations of school programs have the potential to provide useful information for educational program planners and decision makers at the system level (p. v).

Krahn and Lowe (1991, 1993) also conducted a longitudinal study of graduating high school and university students in the cities of Edmonton (Alberta), Toronto, and Sudbury (Ontario). A key feature of the Krahn and Lowe study was a comparison of three diverse urban labour markets (p. 3). However, the Krahn and Lowe study did not focus specifically on Alberta youth from both rural and urban regions.

Youth will continue to have difficulty in making the transition from school

to the world of work without proper career guidance, according to Sankey (1985), Cullen (1978), and MacKenzie (1982). Therefore, according to Kaufman and Lewis (1968), "vocational education has a means of making the school experience relevant" (p. 3). However, a very important factor in this experience is the need to guide students at an early stage to make the best possible career program choice, since most students will invest two or three years studying in a specific career program during their high school years.

The literature for the research problem can be broken into three categories: (1) the transition process, (2) theories of vocational factors that can influence occupational choices of youth, and (3) labour market trends in Canada and Alberta.

**C. The Transition Process**

General

Concerns relating to the preparation and readiness of high school graduates have been identified in educational and governmental research with regard to the transition of graduates into post-secondary educational systems (Hogan, 1980; Bates et. al., 1984; Spain & Sharpe, 1990). More specifically, the transition from high school to higher education has been the subject of several large-scale investigations in Canada (e.g., Breton, 1972, with specific work in Ontario; Williams, 1972; Anisef, 1974; Porter, Porter & Blishen, 1982; and Davis, C., 1985; Manitoba (Lam & Hoffman, 1979; and Lam, 1982); and Alberta (Krahn & Lowe, 1993).

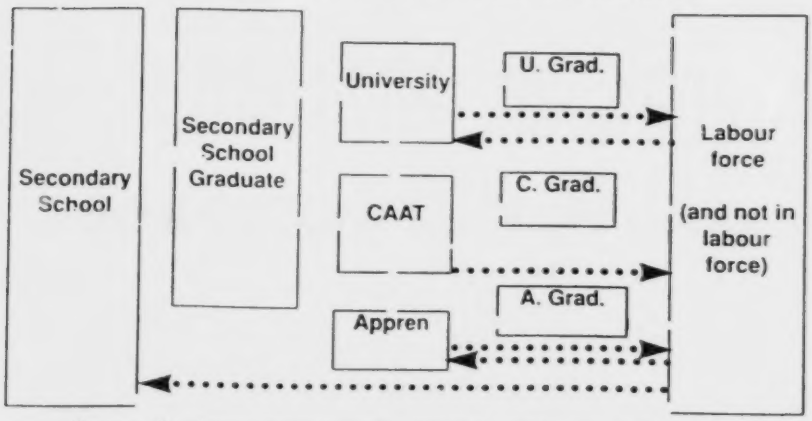
The transition from high school to employment has also been the subject of large-scale investigations. According to the Commission of European Communities (1984), the "transition phase" is significant in four vital ways: (1) it marks the point at which youth cross over from dependence to independence; (2)

as a result of societal and economic structures many of the choices young people make at this time are almost irreversible; (3) the increasing premium being placed upon intellectual skills as opposed to purely manual skills accentuates the importance of the acquisition of a broad base of knowledge, skills, and experience upon or shortly after entering the "real world"; and (4) the transition phase is important because it is at this time that the vulnerability of the disadvantaged groups in our society become more visible (p. 2).

Transition involves the periods of time before young people leave school and after they start employment. The transfer from school to employment can take several pathways as illustrated in Figure 1. It can be a sudden movement directly into the labour force or a gradual process through further education at a university, community college, or technical institute or apprenticeship program. The schematic diagram in Figure 1 illustrates the complexity of the school-to-work transition process. (Ministry of Skills Development, Ontario, 1989).

**FIGURE 1**

**SCHOOL-TO-WORK TRANSITION**




Source : Tri-Ministry Liaison Committee (Ministries of Education, Colleges and Universities and Skills Development), April, 1988

Legend: CAAT = College of Applied Arts and Technology; Appren.= Apprenticeship; U.Grad = University graduate; C. Grad = College of Applied arts and Technology Graduate; A. Grad = Apprenticeship Graduate.

• • • • • ► indicates flow between pathways and labour force.

Any transition is potentially hazardous: it involves decisions that are difficult, important, and sometimes irrevocable. The scheduling of events during the transition from adolescence to adulthood has lasting consequences for career attainment in later life (Hogan, 1980). This viewpoint stresses the need to understand how particular social structures or processes facilitate or frustrate the realization of career plans (Carpenter & Fleishman, 1987).

Researchers and policy makers agree that the nature of work will radically change in the future, making it necessary to inform and prepare young people to adapt. Recent experience during the long recession suggests that young people must be prepared for a work life that includes unemployment, part-time jobs, non-traditional enterprises, and volunteer and non-market activity. The days of holding one lifetime job and retiring with a gold watch are fading quickly. Further, because of the completely changed "world of work," young people should perhaps be encouraged to place emphasis on human values as something towards which they should strive.

Youth need assistance in the transition; the type and amount of assistance needed vary with the individual (Reubens, 1981). For some youth, the period of transition starts at the age of 13 when decisions begin to have implications for later occupational choices.

Further, finding employment is only one of many pathways of transition. If employment is the immediate pathway selected, then making sure of congenial and suitable employment, adjusting to it, finding satisfaction in it, and learning how to progress in a career are important parts of the transition process. Young people have as great a need to learn how to cope with these aspects of working life when a booming economy offers them a wide choice of employment opportunities as when economic recession holds the threat of unemployment over them (European Communities (EC) 1976c, p. 15).

Students not only master academic skills in school but also have a range of social experiences with peers and adults that prepare them for future work roles. These social experiences provide a context for the development of interpersonal relationships that parallel academic achievment for later success (Jencks et al., 1972). Kleiber, et al's, (1986) research into adolescent leisure indicated two distinct categories of leisure experiences: relaxed leisure activities that are high on effect and intrinsic motivation and low on concentration and challenge, e.g., socializing, eating, watching television, listening to music, reading, resting, and other pursuits that Csikszentmihaly and Larson (1984) refer to as transitional activities. The special significance of this latter category of leisure activities is that they appear to provide a bridge or "an important developmental link in the acquisition of a capacity for enjoyment in serious and demanding adult activities" (Kleiber et al., 1986, p. 175).

These patterns corroborate other research (Anisef, 1975) that suggests that, at all grade levels, the structure of friendships and leisure activities can have important consequences for students' later attitudes, behaviour, and decisions.

Problems and Programs

One common problem in the transition to working life is the need for all young people to master the basic competencies required to live and to work as adults. As educational levels advance, differences appear in the range of personal and technical competencies desired in those about to leave school. Before changes in curriculum can be made it is necessary that empirical surveys be conducted so that specific competencies required at different educational levels can be identified (Organization for Economic Co-operation and Development (OECD), 1977).

The problem for young people who enter the labour market before graduating from high school is that they often obtain jobs in occupations or in

industries where the turnover is high and jobs are unstable. This leads to broken employment histories that prevent access to more stable careers.

Recent discussions on how the Canadian labour force adapts to increasingly competitive and technologically sophisticated global service economies have focused on the importance of so-called human-capital development (Radwanski, 1987). According to Day (1992), "more than 50 percent of jobs are in the service industry and we have to address that in the curriculum." A key concern is how to ensure that education and training meet the needs of the new service economy (Employment and Immigration Canada, 1989). Within recent times the focus of public policy has been on skill development, skill shortages, and a looming scarcity of young workers because of the greying population. However, this focus is changing due to high unemployment. In Alberta the unemployment figure is 11.1 percent (Statistics Canada, February 1994) and this can affect students' opportunities to obtain part-time work.

While apprenticeship programs offer graduates and dropouts from compulsory school a relatively smooth transition into the work force, there is a need to review traditional apprenticeship systems in regard to public perception, their adequacy in providing sufficiently skilled human resources, and the need to improve the quality of training while shortening its duration. According to Walsh (1989), the transition from school to work via apprenticeship is one that should be fundamentally reviewed in light of the majority of young people who are already making the transition. Some students at 16 years are holding part-time jobs of more than 10 hours per week, and "if that time was educationally accredited time" and tied in with a training component similar to that in apprenticeship programs, the students would have completed approximately 1500 hours of skills training. Potentially half to three-quarters of all students could graduate from high school qualified in a skilled occupation (p. 23).

Research has also indicated that the number of siblings has an effect on transition, based especially on the availability of financial resources. Persons with a greater number of brothers and sisters face a handicap relative to persons from small families. Featherman and Hauser (1978), for example, state that in twentieth century [North] America, each additional sibling reduces average educational attainment by one fifth of a grade, when all other determinants of achievement are held constant. They claim that it is well understood that the negative effect of the number of siblings on educational attainment, combined with a decline in the average number of siblings, is one factor that has raised average levels of formal schooling during the twentieth century.

Blake (1985) concurs that formal school attainment for [North] American men does indeed vary with family size. However, Mare and Chen (1986) do not support Blake's position and argue:

> The conjecture that family size trends explain increased educational mobility is unsound. First, there is little increase to explain. Second, sibship size groups do not differ much in the association between father's and son's schooling. And, finally, most cross sectional and intercohort variation is attributable to differences in average levels of schooling combined with differences in family background effects at different stages of the schooling process (pp. 411-412).

With regard to gender, transition is also uneven for women. According to Mandell and Crysdale (1993), despite higher grades in high school and higher rates of high school completion and undergraduate university attendance, women are found disproportionately in the academic stream in the humanities and social sciences, rather than the maths and physical sciences. In the vocational stream they are clustered in business courses rather than the technical areas.

Considerable research documents the strong influence families exert in their children's school and career choices (Moss & Rutledge, 1991). A majority of

parents want both their sons and daughters to achieve high educational and occupational success, as do the students themselves. Parents are usually ambitious and interested in their children's success. Both Canadian (Krahn & Lowe, 1991; Tanner, 1991), and American (Weis, 1990) studies note that, even when students' dreams are hopelessly unrealistic given their marks or academic concentration, both male and female students desire higher education.

Females, however, often seem unclear as to their abilities, while males have a stronger sense of self-image and are more satisfied with their personal lives (Sadker et al., 1986; Lindsey, 1990; Richmond-Abbott, 1992). This "confidence gap" (Silverman & Holmes, 1992) increases as young women grow older.

Females' choices of careers do not reflect their educational success. As Whyte et al., (1985) noted, at all ability levels females tend to select from a narrower range of occupations than males. Moreover, their post-school accomplishments do not match their qualifications. In other words, the social context in which the transitions from school to employment are made differs considerably for young men and women.

According to Lewko et al., (1993), in a recently published report from the Premier's Council on Technology (Ontario, 1990), the need for individuals with advanced knowledge in science and technology was directly linked to industrial competitiveness. Competitive advantage in the global economy is becoming increasingly based on the products of research, science, and technology. Many jobs that will be in demand in the 1990s will require employees with mathematics, science, and computer skills. For high-technology-intensive sectors such as computers, micro-electronics, communications equipment, pharmaceuticals, robotics, aerospace, and biotechnology, an adequate supply of personnel is critical (Natural Sciences and Engineering Research Council of Canada (NSERC), 1989).

## D. Theories of Vocational Choice

### Self-Concept

The idea that career choice expresses a person's self-concept is familiar. According to Betz (1988), both John Holland and Donald Super have expressed the same idea, though in somewhat different ways. Holland (1979) posit that a person whose "interests, needs or skills that are not well defined may have a poor sense of identity which could affect career decisions" (p. 30). Super (1990) postulated that "the process of career development is essentially that of developing and implementing occupational self-concepts" (p. 207); therefore, it is critical for students to know themselves and their potential to make the best decisions possible.

Super (1990) has suggested that self-concept theories might instead be named personal construct theories to emphasize individuals' ongoing attempts to represent and understand their interaction with the factors influencing their career choices. One important component of the career decision-making process that recently attracted the attention of researchers is individuals' conceptions about what careers are appropriate for them in light of how they see their personal characteristics and experiences. Gottfredson's (1981) developmental model of occupational aspirations and the construct of self-efficacy explicitly recognize that occupational choices reflect how individuals see themselves and their possibilities in the world of work and that children between six and eight years of age have already classified occupations according to their perception of gender appropriateness. Consequently, occupations perceived as inappropriate to their gender are eliminated from the range of occupations from which they later choose. Gottfredson maintained that once occupations are eliminated at a career development stage, it is unlikely that these will be reconsidered in the high school

years. Despite the fact that women possess the aptitude to pursue education and occupations in science, they may not do so because they have already eliminated these occupations from consideration at an earlier stage of their lives. Such choices are shaped by individuals' experiences within their environments. If Gottfredson's assumptions are valid, women will continue to be under-represented in physical science as long as the vast majority continue to perceive occupations and education in this field as inappropriate for them.

Further, Brooks (1990) confirmed that the developmental model incorporates ideas about self-concept with understanding about the social environment. She suggests that during the career exploration process, individuals refine ideas about occupations appropriate for themselves, primarily according to their self-concepts, which she defines as "their images of who they would like to be" (pp. 374-375). As individuals develop, they form self-concepts and ideas of appropriate occupations in terms of gender, then social class, ability, and finally personal interests and values. Final occupational preferences represent perceptions of what is considered appropriate and attainable. Since individuals must often compromise their preferences when making actual choices, Gottfredson (1981) states that criteria are sacrificed in reverse order according to the most recent level of importance. Therefore, people's earliest conceptions about their place in the world of work are most fundamental and resistant to compromise or modification.

## Self-Efficacy

Self-efficacy (Bandura, 1982) is the belief that individuals hold about their ability to perform a given task or behaviour successfully. Research findings by Hackett, Betz, O'Halloran & Romac (1990), and Matsui, Matsui, and Ohnishi (1990) show how individuals' self-efficacy beliefs are conditioned by their life

experiences and, in turn, how these beliefs condition the vocational choices individuals see as feasible. Brooks (1990) also suggests that other factors in conjunction with self-efficacy might explain individuals' career choices. Regardless of how well a person believes he or she can perform a vocationally relevant task, the choice to do so is probably also affected by outcome expectations beyond personal performance.

Many youth, therefore, need help in making decisions. Career counsellors should be sensitive to and skilled in handling a range of personal-emotional characteristics that extend beyond the immediate vocational dilemma. Anxiety and low self-esteem are contributing factors affecting important life decisions. Other youth simply lack the information needed to make specific career decisions (Chatrand et al.1990; Serling and Betz, 1990).

Even individuals who have made a career choice can benefit from counselling, as they too may report anxiety and discomfort about their choice. Some undecided individuals may not view the inability to make a choice as a serious problem (Newman et al.1990). However, Lucas and Epperson (1990) emphasize that making career decisions may be related to how individuals perceive the role of work in their lives.

Dependent decision makers, according to Buck and Daniels (1985), are people who tend to rely on the expectations and opinions of others. Other writers such as Roe & Siegelman, (1964) and O'Reilly (1973) state that knowledge of an individual's early childhood aptitudes would make it possible to predict the general occupational class he or she will choose.

Holland (1973) categorizes people by six personality types: realistic, investigative, artistic, social, enterprising, and conventional. An individual develops an orientation toward one of the types, and this orientation has a direct effect upon his or her vocational choice. Holland's theory and instruments can be

used to (1) organize occupational information in simple, clear-cut, usable terms; (2) explain and interpret both vocational data and vocational behaviour; and (3) provide specific formulations to facilitate vocational development and to help those people whose vocational development has gone awry (Holland, 1973, p. 86). Holland states:

> the theory could be used to organize an entire school program: curricular clusters, vocational guidance and placement services, occupational exploration programs and research evaluations (1973, p. 96).

Accordingly, Holland's theory could be used to help students learn about themselves, their job choices, and careers. Students learn to ascertain whether their occupational choice is right for them and to ensure that a more desirable occupation has not been overlooked (Holland, 1977).

In *Social Learning and Career Decision Making*, Mitchell et al., (1979) noted how Crites (1978) labeled one group of theories non-psychological. Choices based on accident, laws of supply and demand, the marketplace, and forces which are largely controlled by institutions in society are, therefore, beyond the control of the individual. Another category of choices stresses the influence of the culture, subculture, community, schools, and family in goal setting and decision making (Roe & Siegelman, 1964). Personal vocational choices may also be studied in terms of trait-and-factor theories in which a match is attempted between the characteristics of the person, the job, and inferred motivational factors.

## Occupational Choice

Several studies have investigated occupational choice, including those by Tiedeman and O'Hara, (1963) and Jordaan and Heyde, (1979). These studies focus on the importance of the school system as the primary influence in the various stages of career development. Jordaan and Heyde note that two

fundamental questions must be addressed in working with high school youth: How ready are they? If they are not ready, what can be done to help them?

Wilcox et al. (1984) in *The Preparation for Life Curriculum* state that information about jobs and knowledge of self are the two prerequisites for choosing a job. They suggest that career programs serve four different socio-political functions: social control, social change, individual change, and non-directive learning in which individuals become aware of the range of opportunities and become more autonomous in choosing alternatives suited to their needs and preferences.

Larson and Heppner (1985, p. 55) examined the relationship of problem-solving appraisal to career decision making. They note that the manner in which a person considers, plans for, and implements educational and vocational decisions is central to both theories of vocational development and career-planning interventions. Their results support prior research showing that even students who are decisive about career choices may need career planning assistance. They also suggest that problem-solving ability is related to career decision making and has important implications for career intervention. Kaufman and Lewis (1968), Oakes, (1985) and Poole and Cooney, (1985) also concur.

Bayne (1985) agrees that a student's socioeconomic background exerts a major influence on occupational choices and experiences. Further, he observes that factors influencing the choice of curriculum reflect the social and economic background of the student. Wilcox et al. (1984) note that how pupils see themselves is crucial to how they select career paths. Their findings suggest that information about the range of jobs available and the exploration of personal interests and aptitudes might have more impact on pupil choices if it were provided earlier than is normally the case. Benjamin Levin's 1983 study found results suggesting that students' high school plans are often vague, unrealistic, and

subject to considerable change. His work points to the importance of exposing students to a variety of possibilities while urging them to keep various options open.

## E. Labour Market Trends in Canada and Alberta

Introduction

If young people are going to compete provincially, nationally, and abroad, there need to be better ways of preparing them for the world of work. If a lifelong learning culture is to be sustained, better linkages between formal learning and work must be developed.

In a collaborative study between Canada and the United Kingdom, Evans et al. (1992) looked at the way young people from both countries make the transition from school to work. The study, not surprisingly, found that many young people in Canada, as well as those in the U.K., encounter difficulty in making this transition. The researchers suggested that training policies be developed to facilitate the transition, especially in view of changes in the industrial, technological, and communications fields.

Recent evidence suggests that there has been a shift from personal development goals to employment-related objectives and this shift is in accord with a widespread public perception that technological changes have increased the skill and training requirements for particular types of jobs and the labour force generally (Livingstone et al. 1991; Myles, 1988). An overwhelming majority now believe that workers will have to take further education in order for the country to remain competitive in global markets (Reid, 1992).

The average age of students is rising at all levels of education, and the certifying power of the system has come to be accepted ever more widely in the affairs of employees and employers, in fact, throughout the entire society. The

willingness of North American employers to support the certification functions of schools has stimulated increased demand for "employable" graduates, and for opportunities for multiple entries and exits. Basically there are two forms in which this relationship manifests itself. The most familiar examples are found in the rapidly growing co-operative education movement (Ellis, 1987) and in the more traditional system of apprenticeship. In the former case, the school reaches into the world of employment in order to meet and to validate its objectives; in the latter, employment reaches into the schools.

As Dandurand and Ouellett (1993) have reiterated, new computer technologies have changed so rapidly that it is no longer possible to assume that education received in school will be applicable in the long term and, therefore (Baby, 1985), it is prudent to think in terms of a continuing education process rather than retraining and upgrading. Further, indicators show that the field of vocational education, and indeed education in general, may be subject to sweeping changes in upcoming years.

Barriers

A key element in the transition to employment is a complex labour market structure involving both public and private sector interventions. One such major labour market intervention is the media. Recent examples are a 1992 CTV Television Network program in which Pamela Wallin questioned Dr. Robert Reich, author of *The Work of Nations: Preparing Ourselves for the 21st Century*. Dr. Reich expressed concern for the "large number of kids who are dropping out" of school and concern for the future. He said that most of the money presently spent on training goes towards training people who have college degrees. He spoke of the new economy where the only things that are unique to a national economy are "its people and its infrastructure". Continuing he said that an "investment in

the future" is to spend money on the education, health and nutrition of children. (Transcript, Media Reach, August 2, 1992).

Another example is provided by an address at the University of Alberta in 1992 by Dr. Lester Thurow, Dean of Massachusetts Institute of Technology's Sloan School of Management. Dr. Thurow said that the United States and Canada do not have adequate systems of education for those students who do not go to universities and "even if [we] had the world's best high schools, that's still not good enough in today's world." North Americans have to find ways of "changing the skills distribution" (Thurow, University of Alberta, 1992). Such prominent features on youth unemployment, technological displacement, and discouraged workers, which now appear to be among the most frequently presented items in the news and editorials, probably have a profound effect upon aspirations, plans, and expectations of youth.

The transition from school to work, as noted by Mason (1985), is not immutable and linear. Many people begin contact with the labour market even in primary school years through part-time work, such as paper routes, odd jobs, and babysitting. In fact, concurrent with the formal education process is a continuous interaction with the labour market that grows as one matures. Even if a youth does not have odd jobs while in primary and secondary school, role models are often afforded by older siblings and friends.

Technical displacement within the labour market is also fundamental and politically crucial. Massive intervention has been proffered as a solution; however, many refute this in the belief that a larger segment of society will be superfluous to the production of "necessities" and that the relative decline in the competitiveness of the Canadian economy is basic to the structural employment issue. Futurists, however, feel that Canada has crossed the threshold of becoming a leisure society in which culture and other pursuits can flourish.

One final barrier to achieving greater understanding of school-to-employment transition is the jurisdictional division between the provinces and federal government. Provinces retain control over education, while employment policy resides with the federal government. This constitional division of responsibility makes both systematic research and, ultimately, coordinated policy very unlikely (Mason, 1985, p. 58).

Education System

It is estimated that by the year 2000 over half of all workers will require education or training beyond Grade 12. Over 50 percent of all new jobs will require at least 17 years of education or training. Yet over 30 percent of young people in Alberta drop out without finishing high school (InnoVision, Alberta Education, 1989).

Several reports have examined the education system. The underlying message in all the studies is consistent: an excellent education system is vital not only to the future success of young people but also to the very future of Canada's economy.

Alberta's government, in a report entitled *Achieving the Vision 1991* acknowledges that even though "Alberta has a good education system....it can be improved" ( Alberta Education, 1992, p. iii). On a five-point scale from poor to excellent, the report rates how well Alberta's education system is doing in each of the 13 priority areas outlined in the section Vision for the Nineties. The report encourages stakeholders - school boards, teachers, parents, business people, and community members - to use the report as a catalyst for discussions and action aimed at improving Alberta's education system.

According to another report entitled *International Comparisons in Education: Curriculum, Values and Lessons* (1992) sponsored by the Alberta

Chamber of Resources, "dismay is expressed for the two-thirds of students who do not proceed to post-secondary education" (p. 2). The report states that many students are ill-prepared for an increasingly demanding work place, that too many drop out of formal education, that as a group students are showing a decreasing interest in science and technology and in skilled trades careers, and that their school-to-work transitions are poor compared to those of students in countries such as Japan and the former West Germany.

The report further states that the "major concern with education in [Alberta] is the quality of schooling obtained by the two-thirds of students who do not proceed to post-secondary education" (p. 3). It notes that many of the students are inadequately prepared for a job market that demands ever-increasing formal education and the ability to participate in life-long learning. In effect, the transition from secondary schooling to work life is poor. Further, the report notes that the two-thirds of students who do not go on to post-secondary schooling show less interest in technical careers and the skilled trades. The report also notes differences between Alberta, Japan and the former West Germany as to the attention paid to school-to-work transitions and the encouragement of vocations and skilled trades in those countries. In Japan and the former West Germany, the school-to-work transitions are supported by close relationships between schools and employers, a practice not found in Alberta (p. 4).

The study outlines many recommendations, some of which are directed to partners in education, to business, to educators, and to education policy makers. The overall message is that concerted and determined action by all partners should be focused on addressing current weaknesses and achieving concrete results.

Another study, *A Lot to Learn: Education and Training in Canada (1992)*, released by the Economic Council of Canada, calls for sweeping changes in Canada's educational system to put more power and information into the hands of

students and their parents. It argues that, if present trends continue, Canadian schools will send another one million young people who are functionally illiterate into the work force during the 1990s. The study concludes that the performance of primary (elementary to junior high), secondary, and technical schools has not been satisfactory.

The key recommendations were that a concerted effort be made to ensure that all 16-year-olds are literate and competent in math; that the number of students graduating from secondary school should increase by three percent annually over the next decade; that provinces should set targets to improve student achievement; that schools and employers should establish closer partnerships and that the apprenticeship system should be made more relevant and responsive; that students and parents should have more freedom to choose the schools they want; and that schools should regularly inform the public about the performance of students.

Drop-Outs

Many studies have been conducted into why students dropout. Hahn (1987) cites low income and limited educational background of the family. Rumberger (1987) believes that, while background factors play a part, the interaction of particular background factors and student performance in and out of school are associated with dropping out. According to Ekstrom et al., (1986), drop-outs had lower school grades and test scores, did less homework, and had more disciplinary problems in school
(p. 1).

The Conference Board of Canada, in *Dropping out: The Cost to Canada* (LaFleur, 1992), focused on the economic costs of dropping out. The study estimates that in the year 1989, when just over 137,000 students quit school, the economic cost was four billion dollars. A breakdown reveals that 2.7 billion

dollars of the four billion dollars total is due to lost income and benefits paid to dropouts and 1.3 billion dollars represents added social costs such as more expensive health care, crime, welfare, and the administration of unemployment insurance benefits. Marie Burrows of the Conference Board (see executive summary to Lafleur 1992) describes the economic drain of Canada's school drop-out rate as "staggering and tragic," and there can be little doubt that the cost of dropping out is a message that students need to hear.

Demographics

According to *1989 Education in Alberta, Facts and Figures* (Alberta Education 1990) as cited in Alberta Education, *International Comparisons in Education*, the proportion of school-age youths has "dropped from 42 percent" of the population "to 31 percent in the last 25 years," and a "further drop to 23 percent can be expected over the next 25 years" (p.39). Indications are that there will be progressively fewer students in school, although the need for skilled workers in the province will increase.

The average participation rate of 17-year-olds in formal education in Alberta is 66 percent compared with the national average of 72 percent *(International Comparison in Education, 1992, p. 39).* Some 22 percent of Grade 12 students in Alberta public and separate schools do not graduate with their class. Statistics suggest that of all 17-year-olds in Alberta, approximately 34 percent do not participate in formal education, 22 percent participate but do not graduate with their class, and 44 percent graduate from high school.

Job Trends

The service sector has shown the largest percentage increase in total jobs in recent years, with the business services sub-group expected to experience the most

rapid growth (Krahn, 1992). Within the business services subgroup, the leading industries will be services to dwellings and other buildings, personnel supply services, computer and data processing services, and miscellaneous business services. The health services area is also expected to contribute heavily to the overall growth in this sector.

Service, clerical and administrative support occupations are expected to experience the greatest increases. The combined professional, paraprofessional, and technical group ranks a close third in terms of the net job increase expected.

According to Miles and Fawcett (1989), much of the debate surrounding the growth in services involves the quality of the new jobs being created, and the skills required represent an important indicator of job quality. Yet the importance of understanding trends in the skill content of jobs has not been thoroughly addressed by economists, either in academia or in government.

The report further examined concerns expressed about the perceived increase in the proportion of low-skill jobs as a result of the growth of service industries. Using a unique self-report data set, Miles and Fawcett demonstrated that the service sector has in fact a polarized skill distribution, with some industries (e.g., financial services) characterized by high-skill jobs and others (e.g., personal services) by low-skill jobs. They also found that past analyses based on traditional skill measures derived from broad, largely unchanging occupational titles may have overestimated skills in some service industries and underestimated them in the goods sector (p. vii).

Singleman (1978) notes that Canada's shift away from an economy in which most labour is engaged in the production of goods to one in which most labour is engaged in the production of services has been associated with two very different views of the skill requirements of a post-industrial labour market. On the one hand are the optimistic views of Bell (1973) and others who emphasize the

knowledge-intensive character of work in a post-industrial economy; on the other are the more pessimistic accounts (Braverman, 1974; Kuttner, 1983) pointing to the rapid growth in the low-wage, low-skill personal service industries.

Studies based on a ranking of census occupations according to skill level indicate both views contain a germ of truth. In these studies, the worker trait scores from the *Canadian Classification and Dictionary of Occupation* (CCDO) - now *National Occupational Classification* (Employment and Immigration, 1993) - are used to rank census occupational titles along a variety of skill dimensions. They indicate that the service sector has a bifurcated skill distribution (Myles, 1988). Business services (the information economy), social services (health, education, and welfare), and public administration have relatively high skill requirements; consumer services, including personal services and retail trade, have very few skilled jobs.

**F. Summary**

This chapter reviewed relevant literature to past research and theories in the transition process. Among the theories reviewed were Betz, Holland and Super's career choice and self-concept; Gottfredson's developmental theory of occupational aspirations and Bandura's self-efficacy. Other concepts reviewed were the influence of the family and the importance of the school system.

The many barriers in the transition process such as a complex labour market structure, technical displacement and the jurisdictional division between the provinces and Federal Government were also reviewed. The next chapter describes the sample, the instrument, the research design and the procedures followed in this study.

# Chapter III
# METHODOLOGY AND RESEARCH DESIGN

## A. Introduction

This study investigated the planned pathways from school to employment and/ or further education of 1,047 high school students in Alberta, Canada. Methodology for the study is described in detail in this chapter. Information presented includes a description of the sample, the instrument used, how the instrument was developed for this study, and the procedure for its administration.

## B. Research Design

To explore the problem selected for the study adequately, a two-phased approach was used. The first phase involved the development of an instrument and the second phase consisted of using the refined instrument developed to investigate youth transition from school to employment and/or further education. The results obtained on the questionnaire were analyzed using frequencies, percentages and the chi-square test.

The principal statistical technique used was the chi-square test for association. The level of significance was set at .05, as Kleinbaum and Kupper (1978) indicate this represents the upper level of borderline significance for this type of study. The required statistical test for determining the independence of samples, when independent and dependent variables both comprise frequency data, is the chi-square test for association (Nie et al., 1975), hence the use of this test in this study. The review of the methodology is discussed under the following headings:

Sampling

Instrument Design

Pilot Study

Instrument Validity and Reliability

Procedures

**C. Population**

The population for this study comprised of all Grade 11 students registered in the Province of Alberta Public School System for the 1993-1994 school year. The total Grade 11 students registered in thr Public School System for the l993-1994 school year is 35,259 (Alberta Education, 1994).

**D. Sampling**

The total sample consisted of 1,047 students. Their ages ranged from 15 to 20 years; the greatest proportion of the students (47.4%) were 16 years old.

All students were registered in Grade 11 programs during the 1993-1994 school term. Permission to include them in the study was received through a signed consent form (Appendix A).

The Department of Education of the Government of Alberta, provided a 10 percent random list of public high schools in the province. The sampling subjects were drawn from this list.

With the exception of students in a Social Studies 20 class, all the students at the time of completing the questionnaire were enrolled in Grade 11 in the Career and Life Management (CALM) 20 class for the l993-1994 school term.

The total number of students enrolled in Grade 11 in the Province of Alberta for l993-1994 school term is 35,259, thus the study sample represents three percent of the total Grade 11 student population in the public school system

in Alberta.

The final sample comprised 520 females (49.7%) and 500 males (47.8%). Twenty-seven (2.5%) of the subjects did not identify their gender. Table 3.1 is a summary of the number of females and males in the sample.

Table 3.1
Summary Study Sample by Gender
(N=1047)

| Gender | Frequency (n=1047) | Percent (100) |
|---|---|---|
| Female | 520 | 49.7 |
| Male | 500 | 47.8 |
| *(Missing) | 27 | 2.5 |

*Students who failed to identify their gender.

The selection of the sample took place in many stages. Prior to the study preliminary data were provided by the Department of Education from its data bank. The Department of Education provided a 10 percent random selection of high schools in the Province of Alberta together with the name and address of the principal of each. A list of 1993 Alberta Municipalities both urban and rural was obtained from Alberta Municipal Affairs, and a list of superintendents of counties and school divisions was obtained from the Alberta Teachers' Association.

A letter and copy of the questionnaire were sent to randomly selected superintendents asking permission to conduct the study in their school jurisdictions/divisions (Appendix B). Schools in the Edmonton area were contacted through Faculty of Education Field Services Office at the University of

Alberta. Once permission was received from respective school superintendents (Appendix C), a letter and copy of the questionnaire were sent to school principals randomly selected from the school jurisdictions/divisions (Appendix D) asking for permission to conduct research with a Career and Life Management (CALM) 20 class. All principals contacted agreed to participate. When permission was received from the principals (Appendix E) and the number of students identified in each class, a package was sent to that principal or an individual designated by him or her. The package contained a permission letter to parents/guardians which explained the purpose of the study. It also contained a letter to the students explaining the purpose of the study and advising that they did not have to answer any of the questions unless they wanted to. Further, the students were informed of the confidentiality of the responses to the questionnaire.

**E. Instrument Design**

Developing the instrument for this study involved utilizing, in part, questions from an instrument developed by Dr. Spain and Dr.Sharpe of Newfoundland (1990). Other relevant questions from other sources were developed with reference to the nature of the study and the grade level of the students to be investigated. Finally, the instrument called **Youth Transition from School to Employment and/or Further Education: An Alberta Perspective** was developed for this study.

The initial development of the questionnaire generated in excess of 120 possible questions. This number was reduced to 105 through a series of cross references with the literature and the removal of repetitive questions. The synthesization of the document was carried out within the framework of three sections: Background, Career Plans, and Work Attitudes and Knowledge.

A panel of professionals with various backgrounds in the field of education

was co-opted to review and to further refine the draft questionnaire. The panel consisted of the following members:

Mr. George Robert, Teacher, Holy Trinity High School

Mr. Ernie Lazaruk, Counsellor and Department Head of Student Activities, Victoria High School

Ms. B. Oakes, Business Education Instructor, Alberta College

Ms. Y. Morris-Scarlett, Nurse Educator, Faculty of Nursing

Dr. Clement King, Retired Educational Psychology Professor

Because of time constraints, the questionnaire together with a synopsis of the research plans was hand-delivered to each member of the panel. The panel was asked to evaluate the questions for comprehensiveness, level of specificity, representativeness, duplication and clarity. At the panel's recommendation, various questions were eliminated and broken down into two separate questions, and in two instances the wording was refined, leaving a document with 91 questions.

The final questionnaire was then reviewed for consistency of grammatical form by an individual majoring in English and by a specialist at the Centre for Research in Applied Measurement, Faculty of Education, University of Alberta. This review was conducted for the following reasons: to provide both face and content validity for the instrument; to determine if statements were properly sequenced; to determine if statements were correctly presented; and to determine if additional statements were required. Following this review, the necessary modifications were made before the pilot testing phase of this study.

**F. Pilot Study**

In conducting educational research incorporating new instruments it is recommended that pilot testing be performed in order to appraise the instruments and procedures used in their implementation:

> It is usually highly desirable to run a pilot test on a questionnaire and to revise these questionnaires based on the results (Tuckman 1988, p. 223).

Pilot testing in this study was used to refine the instrument further. The preliminary survey instrument was administered to two Career and Life Management (CALM) 20 classes totalling 63 students located in the Millwoods district of Edmonton and the Town of Fairview in the Peace River region of the Province of Alberta. George Robert, a CALM 20 teacher at the Millwoods school who kindly volunteered to pilot test the instrument, was a member of the panel who reviewed the questionnaire. The other teacher involved in the pilot testing was Gordon Ivey from Fairview. Both teachers unhesitatingly agreed to participate in the pilot testing of the instrument. A special thanks is given to the teachers and the administration of these schools.

As part of the pilot testing process the teachers were given a brief explanation of the purposes and objectives of both the pilot study and the survey. In addition, they were asked to request that the students be both honest and critical in their responses to items of the questionnaire. A covering letter (Appendix F) giving a brief summary of the study as well as specific instructions to the participants accompanied the survey instrument. Respondents were asked to do the following:

1 comment on whether or not the questions were easily understood;

2. feel free to add comments as necessary;

3. complete the questionnaire by filling in the response sheet;

4. note the time taken to complete the question;
5. return the questionnaires and answer sheets in the enclosed self-addressed envelope to the researcher, Nina Powlette.

The Millwoods questionnaires were delivered and picked up by the researcher; those in Fairview were sent and returned via Purolator Courier Ltd. As a result of the pilot study a number of modifications were made. These are as follows:

1. the statement "My personal choice with some parental advice" was added to question No. 45.
2. Math 30 and 33 were added as a response selection to question 13;
3. the level of response "somewhat important" was removed from a Likert-scale question, reducing it from five levels to four to make it consistent with similar scale levels;
4. two questions were incorporated into other similar Likert-scale questions;
5. a question which appeared twice one was eliminated.

Information from this process reduced the items on the questionnaire to 89 forced choices and open-ended questions. It was estimated that the questionnaire took an average of 30 minutes to complete.

As a consequence of the critical process of developing the instrument utilizing pilot test results, there seemed to be adequate evidence that the instrument was ready for use with Grade 11 students. The final form of the six-page questionnaire (Appendix G) emerged following some additional refinements. The final form of the instrument was administered to 25 CALM 20 students in an Edmonton high school. The instrument was administered to the students, and after a delay the same instrument was again administered to the same students. Scores obtained from the two administrations were then correlated.

## G. Instrument Validity and Reliability

According to Cronbach (1949), "a test [or instrument] is valid to the degree that we know what it measures or predicts" (p. 48). Therefore, the validity of an instrument is indicated by the extent to which an instrument measures what it is intended to measure. The reliability of an instrument, on the other hand, indicates the extent to which it yields stable or equivalent results in replicated use.

Validity and reliability of the instrument developed for the study are determined separately. High levels of validity and reliability are needed for the researcher to have confidence in measurement results.

### Tests for Validity

Both the content validity and face validity of the instrument developed were determined in this study.

### Content Validity

> According to Mehrens and Ledhman (1984), content validity is typically determined by a thorough inspection of the constituent items. Each item is judged on whether or not it represents the specified domain. Although a detailed, systematic, critical inspection of the test items is probably the single best way to determine content validity, such inspection does have some drawbacks. It is subjective and does not yield any quantitative expression. Two persons--whether or not they have the understanding of the content domain--may well make different judgments about the match of the item and the domain (pp. 290-291).

Content validity was therefore obtained by having various professionals examine each item on the questionnaire for comprehensiveness, level of specificity, representativeness, duplication, and clarity. The feedback given was used to modify the instrument.

The sampling validity in this study was met by the careful multi-phased

instrument construction process described earlier. The finalized version of the instrument was as a result of comments received after five professionals were involved in the initial phases of the instrument development.

In addition, potential items were carefully collected from a variety of sources. The procedures used throughout the development of the instrument, for example, the selection of the panel of judges and the use of pilot testing, are consistent with accepted research methods for establishing the content validity of any research instruments. Based on this careful, systematic, and thorough instrument construction process, as well as the incorporation of responses from various professionals, it was concluded that the criteria for establishing the content validity of this instrument has been met.

Face Validity

Mehrens and Lehman (1984) caution the researcher to avoid confusing content validity with face validity. According to Mehrens and Lehman,

> face validity is whether the test looks valid "on the face of it." That is, would untrained people who look at or take the test be likely to think the test is measuring what its author claims? Face validity often is a desirable feature of a test in the sense that it is useful from a public acceptance standpoint. If a test appears irrelevant, examinees may not take the test seriously, or potential users may not consider the results useful (p. 295).

The face validity of this instrument was established by submitting the completed instrument to the researcher's examining study committee as well as graduate students from the Department of Secondary Education at the University of Alberta. Their critical comments and suggestions were considered in preparing the final version of the questionnaire.

Reliability

The reliability of the instrument was established by a test re-test completed by a CALM 20 class consisting of 25 students from a school located in Edmonton. The test re-test was administered with a 15 minute interval. A Pearson correlation reliability coefficient was calculated at .86.

Reliability was also addressed as suggested by Sudman and Bradburn (1982), by considerable attention given to the order of questions, length of the questionnaire, and instructions to participants.

**H. Ethical Considerations**

In order to ensure that ethical guidelines were adhered to, the following steps were taken:

1. Copies of both the research design and the research instrument were submitted to the Department of Secondary Education Ethics Review Committee. The purpose of this review was to ensure that the research design was conducted in accordance with the ethical guidelines for conducting research established by the University of Alberta. The Ethics Committee approved the study as meeting the guidelines.

2. A letter was sent to parents/guardians seeking permission to include their child in the study. The letter explained the purpose of the study and informed parents that students did not have to answer any question unless they wanted to, and they could withdraw at any time. The parents/guardian were also informed that the information given by students would be held in strict confidence and that results would be summarised and reported anonymously. The parents/guardians permitted their sons and daughters to participate in the study.

3. To ensure ethical correctness, the students who participated were informed of the purpose and nature of the research study in a covering letter

(Appendix H). They were told that they were free to answer or not answer any of the questions. Students were also instructed to write the name of their community in place of their names on the answer sheet, and told that the information given would be held in strict confidence and not be disclosed to any other person. They were also told that information given will be reported as summary and not individual data.

**I. Procedures**

Data Collection

Letters (Appendix B) were mailed to selected school superintendents seeking their permission to approach schools in their jurisdictions to ask them to participate in the survey. Appendix C provides a sample of the response from superintendents. Having received approval from superintendents to approach schools in their jurisdiction, selected school principals were then approached for permission to include students from a Career and Life Management 20 class in the survey (Appendix D). A sample of a principal's response is at Appendix E. Finally, packages containing questionnaires, answer sheets, pencils, and return postage were mailed to schools between October and November, 1993, for administration to students in the Career and Life Management 20 classes.

By the third week in December, 1993, all of the 1,290 questionnaires had been returned, of which 1,106 (85.8%) had been completed. The difference of 184 (14.2%) was attributed to students who had been absent the day the questionnaire was administered, or who had dropped out or transferred to another school. Examination of the completed questionnaires revealed that 59 or 5.3 percent were unusable, leaving a total of N = 1047 or 80.5 percent as usable.

Data Analysis

The responses from the study were examined for completeness and

correctness before they were subjected to optical (machine) scoring. The data were subjected to frequency counts and percentages and then analyzed largely through quantitative statistical method available through SPSS (SPSS for Windows, Release 6.0., available through June 30, 1994). The quantitative statistical method utilized was chi-square analysis. According to Wiserman (1985), this type of study is concerned with the "gathering of facts rather than the manipulating of variables (p.130)," and West & Newton (1983) note that the focus is on the reporting of statistical data to "provide information in an area as complex as this." Other studies using a survey methodology and reporting data analysis primarily in frequencies are Krahn & Lowe (1993), Sharpe & Spain (1991); Bynner (1987),and West & Newton (1983). Prior to computer analysis, content analysis was undertaken and demographic findings were formulated.

**J. Summary**

This chapter presented an integrated summary of the methodology utilized in this study. The research design and the procedures used to obtain a sample for the study were outlined. The procedures for developing the instrument, as well as those for determining validity and reliability were described. The pilot testing procedure was outlined, as well as that for adhering to strict ethical guidelines. The procedure for conducting the study and the data collection process were explained. The next chapter presents the research findings of selected variables.

# Chapter IV

# TREATMENT OF DATA AND FINDINGS

## A. Introduction

As indicated in Chapter I, the study was designed to investigate the social, psychological and economic variables which influence the career decisions of Alberta youth in the transition from school to employment and/or further education. In this chapter the findings generated from the analysis of selected questionnaire responses are presented as follows. First, the overall results for pathway categories are presented. Second, the findings according to the seven sub-questions that provided the information for the study are presented and discussed. Third, the chapter is concluded with a summary.

Chapter IV has been organized according to the seven sub-questions investigated in this study. Two methods were applied to data from the questionnaire. The first consisted of frequency counts and percentages, and the second consisted of a statistical method utilizing the chi-square test of significance. The chi-square statistics allow for the comparison of observed frequencies to a theoretical or expected frequency in order to determine whether significant differences and thus a relationship exist. For the purpose of this investigation, the .05 level of significance was selected.

## B. Pathways

According to the schematic diagram ( Figure 1) there are several transitional pathways to work. Table 4.1 is a summary of the choice of pathways identified by respondents in order of prevalence. Four categories of pathways are identified: (a) University (n=366, 35.0%), (b) Community College/College (n=194, 18.5%), (c) Technical Institute/Apprenticeship (n=229, 21.9%), (d) Other/Don't know/ No

response (n=258, 24.6%).

Overall, 16.5 percent more respondents selected university over college, and 3.4 percent fewer selected college over technical institute/apprenticeship. Slightly less than one-quarter of participants selected some other route or were undecided.

Table 4.1
Pathways

| Categories | Number (N=1047) | Percent (100) |
|---|---|---|
| University (U) | 366 | 35.0 |
| Community College/College (CC) | 194 | 18.5 |
| Tech.Institute /Apprenticeship (TI/A) | 229 | 21.9 |
| Other(Don't know/No response) (O) | 258 | 24.6 |

**C. Question 1. What are the career and further education plans of Alberta youth.**

Career Plans

During the process of learning and developing, decisions about occupational choice are of great concern to youth. Occupational choice represents the first major choice youth must make in life and this choice is likely to have profound effects on later experience. Identification of a career by young people, therefore, whether it is specific or vague, or the lack of identification of a career, enables policy planners to ascertain where the young people are in their various stages of career development and allows policy planners to intervene and provide guidance and direction to facilitate the transition process from school to

employment. Even those who have identified a career need guidance, as they may be unsure of their choices. Further, for those who have identified a career, the length of time spent contemplating the chosen career is important. This section presents career choices, frequency of choices, and the length of time over which the career choices were contemplated.

Students were asked what career (job or profession) they would like to pursue. The careers they chose are shown in Table 4.2. Among the males the most popular choices were professional athlete, engineering, computing science, and law enforcement. Among the females the most popular choices were teaching, nursing, and office work of some sort. More unusual choices for males were politician, astronaut, diplomat, and fighter pilot. More unusual choices for females were mortician, astronomer, oceanographer, and welder. However, almost one quarter (24.7%) of the sample did not know or could not respond to this question.

In identifying a career, several respondents made more than one choice. Most respondents (61.3%) gave one career choice, 10.6 percent gave two choices, 2.4 percent gave three choices, and 1 percent gave four or more choices (Table 4.3). When responses are organized using the major categories of the *National Occupational Classification Index of Titles* (Employment and Immigration Canada, 1993), approximately 28.1 percent of student choices were distributed among the categories of natural and applied sciences and health, 13.3 percent were in social science and 10.1 percent were in sales/service (See Table 4.2).

Table 4.2
Future Career Choice

| Occupational Group | All Students (n=1047) | | Female (n=402) | | Male (n=387) | |
|---|---|---|---|---|---|---|
| | Freq. | Percent | Freq. | Percent | Freq. | Percent |
| Management (senior, middle, owner) | 26 | 2.5 | 12 | 3.0 | 14 | 3.6 |
| Business (accounting, finance, office) | 76 | 7.3 | 56 | 13.9 | 20 | 5.2 |
| Natural & Applied Sciences (mathematicians, physiscists, engineers, climatologists, computing, etc.) | 123 | 11.7 | 35 | 8.7 | 88 | 22.7 |
| Health (doctor, nurse, dentist, etc.) | 172 | 16.4 | 117 | 29.1 | 55 | 14.2 |
| Social Science (law, education, psychologists, etc.) | 130 | 12.4 | 99 | 24.6 | 31 | 8.0 |
| Art, Culture, Recreation & Sport (actor, comedian, sculptor, hockey player, etc.) | 105 | 10.0 | 46 | 11.4 | 59 | 15.2 |
| Sales/Service (law enforcement, armed forces, parks, pursers, chefs, etc.) | 106 | 10.1 | 35 | 8.7 | 71 | 18.3 |
| Trades (auto mechanic, welder, etc.) | 40 | 3.8 | 2 | 0.5 | 38 | 9.8 |
| Primary Industry (mining, farming, oil & gas, etc.) | 11 | 1.1 | - | - | 11 | 2.8 |
| Don't know | 50 | 4.8 | 24 | 6.0 | 26 | 6.7 |
| No response | 208 | 19.9 | | - | | - |

Note: respondents identifying a career n =789; no identification n=258.

Table 4.3
Percentage Distribution of Number of Choices

| Number of Choices | Frequency (n=1047) | Percent (100) |
|---|---|---|
| One career choice given | 642 | 61.3 |
| Two career choices given | 111 | 10.6 |
| Three career choices given | 25 | 2.4 |
| Four or more career choices given | 11 | 1.0 |
| Don't know | 50 | 4.8 |
| (No response | 208 | 19.9) |

Development of Occupational Choices

The respondents were also asked how long they had thought about the career they chose. There was great variation in the responses given. From the point of view of developmental theorists who see occupational choice as a long process of development towards the choice point, some of the results are difficult to explain. Approximately one in seven (14.3%) desired the career chosen for six months or less, whereas 15 percent wanted the career chosen for one year. About two out of five (38.4%) wanted the career chosen for two years or more (See Table 4.4.). Developmental theorists would argue that arrival at choices three, four, or five years prior to leaving school indicates that occupational choice does involve processes which are in operation for some time and that occupational choice is not a mere matching process that occurs when the time for decision making occurs.

Table 4.4
Distribution of Responses for Period Contemplating Career Choices

| Period | Total (n=1047) Freq. | Percent | Female (n=492) Freq. | Percent | Male (n=483) Freq. | Percent |
|---|---|---|---|---|---|---|
| Less than six months | 85 | 8.1 | 42 | 8.5 | 42 | 8.7 |
| Six months | 65 | 6.2 | 40 | 8.1 | 25 | 5.2 |
| One year | 157 | 15.0 | 82 | 16.6 | 71 | 14.7 |
| Two years | 149 | 14.2 | 73 | 14.8 | 70 | 14.5 |
| More than three years | 253 | 24.2 | 118 | 23.9 | 127 | 26.2 |
| Don't know | 292 | 27.9 | 137 | 27.8 | 148 | 30.6 |
| (No response | 46 | 4.4) | | | | |

The data were further examined to check whether a relationship between pathway and period contemplating career choice existed, and if a relationship existed, how significant was the relationship. Using a chi-square analysis, results ($X^2 = 43.03$, df = 15, p = < .001) show that there was a significant relationship at the .05 level. Looking at the data it is observed that the cell for "more than three years", which is the longest period, and university accounted for 92 respondents and the same cell with technical institute/apprenticeship accounted for 83 respondents. The data, therefore, provide fairly conclusive evidence of a significant relationship between the length of time contemplating a career choice and the chosen pathway (See Appendix l (a)).

The data were further examined to check the significance, if any, of the relationship between the distribution of responses for period contemplating career choices and gender. The results showed that there was no significant relationship between period contemplating career choices and gender.

The finding in this section for career and further education plans of Alberta youth showed that many were undecided and therefore perhaps could benefit from career information. This finding was corroborated by two other researchers. In a study of adolescents in an Edmonton high school Shaske, (1979) experimented with two groups of students in a career maturity program. She found that students whose skills were low, medium, or high benefited equally from the treatment of exposure to more career information.

Researchers Snook and Cusworth (1985), in their study of 716 junior and senior high school students in the Red Deer Catholic School District and Three Hills School Division, found that students did not appear to be satisfied with the amount of information about job or career planning they received. However, when Paproski (1978) conducted a study on student opinion on career development among grade 9 and 12 students from two Edmonton, Alberta, separate schools, the students indicated that the schools were providing adequate help to them in making career decisions. Students in Paproski's study (71.3%) also indicated that their career plans were "very" or "fairly" specific.

**D. Question 2. How extensive and how realistic is their knowledge of the labour market?**

Knowledge of Occupations

There have been two very different views of the skill requirements of the labour market (Miles & Fawcett, 1989). Debates have focused on the quality of the new jobs and the importance of understanding trends in the skill content of jobs. The consensus has been that growth in the service sector usually creates low-skill jobs, but high-skill jobs are usually created in sectors such as financial services.

To find out how knowledgeable youth are about the level of difficulty for

the performance of some occupations, respondents were presented with a number of occupations, some low-skill and some high-skill, selected according to the degree of reasoning, math, and language skills necessary to perform them, according to the *National Occupational Classification Index of Titles* (Employment & Immigration, Canada 1993). The students were asked to rate the level of difficulty of each of these occupations. Table 4.5 summarises the distribution of responses for work knowledge. Respondents perceived that the two most difficult occupations were surgeon (75.0%) and dentist (56.7%). Being a teacher or a farmer was rated by the respondents at about the same level of difficulty (25.4% and 25.2%, respectively). Occupations perceived to be very easy were those of clerk in a store (42.0%) and janitor/custodian (38.5%). The occupation of beautician 24.2 percent and the occupation of truck driver 24.4 percent were rated about the same level of difficulty. Overall the actual rankings of the occupations conformed generally to rankings based on the levels of ability and training required for each occupation according to the NCO index of titles.

Table 4.5
Distribution of Responses for Knowledge of Occupations

| Statements | Very Easy | Easy | Somewhat Difficult | Very Difficult |
|---|---|---|---|---|
| Store Clerk | 440<br>42.0% | 497<br>47.5% | 93<br>27.2% | 11<br>6.0% |
| Store Manager | 68<br>6.5% | 283<br>27.0% | 588<br>56.2% | 100<br>9.6% |
| Dentist | 24<br>2.3% | 75<br>7.2% | 352<br>33.6% | 593<br>56.7% |
| Nurse | 20<br>1.9% | 121<br>11.6% | 511<br>48.8% | 392<br>37.4% |
| Teacher | 45<br>4.3% | 206<br>19.7% | 527<br>50.3% | 265<br>25.4% |
| Truck Driver | 255<br>24.4% | 450<br>43.0% | 285<br>27.2% | 53<br>5.1% |
| Cook | 189<br>18.1% | 496<br>47.4% | 303<br>28.9% | 54<br>5.2% |
| Oil Rig worker | 64<br>6.1% | 190<br>18.1% | 455<br>43.5% | 331<br>31.6% |
| Film Producer | 75<br>7.2% | 239<br>22.8% | 449<br>42.9% | 276<br>26.4% |
| Surgeon | 29<br>2.8% | 75<br>7.2% | 153<br>14.6% | 785<br>75.0% |
| Mechanic | 63<br>6.0% | 227<br>21.7% | 540<br>51.6% | 210<br>20.1% |
| Pilot | 39<br>3.7% | 172<br>16.4% | 476<br>45.5% | 355<br>33.9% |
| Grain Elevator Operator | 172<br>16.4% | 440<br>42.0% | 357<br>34.1% | 68<br>6.5% |

Table 4.5 Continued

| | Very Easy | Easy | Somewhat Difficult | Very Difficult |
|---|---|---|---|---|
| Secretary | 175<br>16.7% | 519<br>49.6% | 305<br>29.3% | 43<br>4.1% |
| Beautician | 253<br>24.2% | 491<br>46.9% | 252<br>24.1% | 43<br>4.1% |
| Construction Worker | 99<br>9.5% | 258<br>24.6% | 501<br>47.9% | 186<br>17.8% |
| Computer Systems Analyst | 60<br>5.7% | 155<br>14.1% | 378<br>36.1% | 450<br>43.0% |
| Janitor/Custodian | 403<br>38.5% | 406<br>38.8% | 187<br>17.9% | 44<br>4.2% |
| Salesman | 179<br>17.1% | 474<br>45.3% | 319<br>30.5% | 69<br>6.6% |
| Farmer | 124<br>11.8% | 248<br>23.7% | 396<br>37.8% | 264<br>25.2% |

The data on the ranking of occupations were further examined for significance using a chi-square test. Results showed that there were several significant relationships between job (occupation) easiness of performance and pathways based on the chi-square analysis .

The values within the contingency table (Appendix I(b)) indicate that the following occupations were significant: clerk in a store ($X^2 = 22.93$, $df = 9$, $p < .028$); mechanic ($X^2 = 21.85$, $df = 9$, $p < .039$); beautician ($X^2 = 21.74$, $df = 9$, $p < .040$); computer systems analyst ($X^2 = 26.48$, $df = 9$, $p < .009$); and janitor/ custodian ($X^2 = 17.79$, $df = 9$, $p < .037$).

The findings in this study indicate that the occupations students are knowledgeable about, according to the ranking of level of difficulty, are consistent

with the National Occupational Classification Index of Titles. However, closer examination of these occupations indicates that they are all, with the exception of computer systems analyst, in the middle to the low skill area and that students know less about occupations requiring high-level mathematics, reasoning, and language skills.

Hours of Part-Time Work

Knowledge of the labour market is also gained by participating in the labour market, even though the job held is not necessarily the chosen career. Being involved in the labour force, even on a part-time basis, leads to the acquisition of many attributes which enable individuals to function effectively in a variety of social and work situations and to assist them in making career choices. Participants were asked if they had a part-time job and, if so, how many hours they spent on the job per week, on average.

Table 4.6 is a summary of the distribution of responses for hours of part-time work per week. Over half (56.4%) of respondents were involved in part-time work. The hours of part-time worked varied. Of the respondents, 9.3 percent were working more than 20 hours per week, with males outnumbering females almost two to one in that category. Almost fifteen percent (14.5%) of respondents worked 10-14 hours per week, and 13.8 percent worked 5-9 hours per week. However, slightly more than two out of five (42.1%) respondents were not involved in part-time work.

Table 4.6
Distribution of Responses for Hours of Part-Time Work per Week

| Hours | All students (n=1047) Freq. | Percent | Female (n=515) Freq. | Percent | Male (n=491) Freq. | Percent |
|---|---|---|---|---|---|---|
| More than 20 | 97 | 9.3 | 33 | 6.4 | 61 | 12.4 |
| 15-19 | 138 | 13.2 | 63 | 12.2 | 69 | 14.1 |
| 10-14 | 152 | 14.5 | 82 | 16.0 | 66 | 13.5 |
| 5-9 | 145 | 13.8 | 70 | 13.6 | 71 | 14.3 |
| Less than 5 | 59 | 5.6 | 32 | 6.2 | 26 | 5.3 |
| Not applicable | 441 | 42.1 | 235 | 45.6 | 198 | 40.4 |
| (No response | 15 | 1.4) | | | | |

The data were further probed to check whether a relationship existed between hours of part-time work and transitional pathway identified. The results of the chi-square test for significance showed that the relationship was not significant.

The data for distribution of responses for hours of part-time work per week were further examined to find out whether a significant relationship existed between hours of part-time work per week and gender. The results ($X^2 = 13.95$, df = 5, $p < .016$) showed that there was a significant relationship. The table for the Chi-square analysis is at Appendix I(c).

The results concur with the general belief that working part-time does not affect a student's aspiration to attend an institution of higher learning. Working part-time can, however, indirectly affect the student's acceptance into a particular program because, according to Steel (1991), the general assumption [though not proven] is that students who work part-time tend to spend less time studying or participating in extracurricular activities.

Length of Part-Time

Another consideration is how long students spend in part-time work. Studies (Hotchkiss, 1986, Green 1990) have pointed out the lack of a carefully thought-out theoretical model process of the effects of duration of part-time work on students. Many studies fail to address their findings within a relevant development perspective in such a way that a continuum of changes emerges.

Table 4.7 summarizes the responses for length of part-time work. Students who were working six months to a year and those who have been working two to three years were almost even, 16.1 percent and 16.2 percent respectively. Less than 10 percent of respondents have been working part-time for four or more years. Slightly more than four out of 10 of the sample do not have a part-time job.

Table 4.7
Distribution of Responses for Length of Time Working Part-Time

| Period | All students (n=1047) Freq. | Percent | Female (n=514) Freq. | Percent | Male (n= 491) Freq. | Percent |
|---|---|---|---|---|---|---|
| Less than six months | 160 | 15.3 | 81 | 15.8 | 74 | 15.1 |
| 6 months - 1 year | 168 | 16.1 | 89 | 17.3 | 75 | 15.2 |
| 2 - 3 years | 169 | 16.2 | 73 | 14.2 | 88 | 17.7 |
| 4 - 5 years | 66 | 6.3 | 28 | 5.4 | 37 | 7.5 |
| More than 5 years | 34 | 3.2 | 10 | 2.0 | 22 | 4.4 |
| Not applicable | 435 | 41.5 | 233 | 45.3 | 195 | 39.2 |
| (No response | 15 | 1.4) | | | | |

The data for responses for how long working part-time were examined for significant relationship with both pathway and gender. The results of a chi-square test for pathway showed that there was no significant relationship. However, the

results of a chi square test ($X^2 = 11.51$, df = 5, $p < .042$) for how long working part-time and gender showed that there was a significant relationship (Appendix I(d).

Reason for Working Part-Time

The rationale given by respondents for why they worked part-time was also examined. Berryman and Schneider (1983) and Froese, (1993) found that four out of the five top-ranked reasons students worked were monetary. They also stated that reasons students gave for leaving a job were low pay, interference with social life, and interference with school activities.

Table 4.8 is a summary of the reasons why respondents said they worked part-time. The major reasons in order of decreasing priority were: (1) "for the money," 56.1 percent, (2) "for the experience," 16.1 percent, (3) "other," 8.6 percent, (4) "something special," 7.7 percent, (5) "to help the family," 5.4 percent, and (6) to "pay for further education," 3.4 percent.

Table 4.8
Distribution of Responses to Reason for Working Part-time

| Reason | All students (n=1047) Freq. | Percent | Female (n=506) Freq. | Percent | Male (n= 487) Freq. | Percent |
|---|---|---|---|---|---|---|
| Money | 587 | 56.1 | 279 | 55.1 | 293 | 60.2 |
| Experience | 169 | 16.1 | 95 | 18.8 | 68 | 13.9 |
| Family | 57 | 5.4 | 23 | 4.5 | 31 | 6.4 |
| Something special | 81 | 7.7 | 35 | 6.9 | 46 | 9.4 |
| Further education | 35 | 3.3 | 20 | 4.0 | 14 | 2.9 |
| Other | 90 | 8.6 | 54 | 10.7 | 35 | 7.2 |
| (No response | 28 | 2.7) | | | | |

Probing the reason for working part-time data to see whether a relationship existed between this data and transitional pathway revealed that there was no significant relationship. A chi-square test was used to measure the significance.

This data were further probed for any significant relationship with gender. According to the Chi-square analysis ($X^2 = 12.25$, $df = 5$, $p < .031$) there was a significant relationship with gender (Appendix I(e).

This particular finding is interesting in that it parallels that of Froese (1993), who investigated an urban Alberta high school where students worked part-time. Froese found that the reasons students gave for doing part-time work included earning money to buy luxury items and pay automobile expenses. In her study the part-time student workers were employed in food service, manual labour, retail sales, janitorial positions and child-care. The small number of students whose part-time work exceeded 20 hours per week reported that the long hours did not have an impact on their grades. Therefore, their aspirations to further education were not jeopardized.

**E. Question 3. What are youths' attitudes towards work.**

Attitude Towards Work

Since career paths and transition into the labour market are affected by youths' perception of work, the values placed on work are also an influencing factor for their success. Attitude towards work will also influence and be influenced by conditions they place on employment, their motivation to work, and a host of social and personal factors. Attitude is also likely to be influenced by any previous experiences related to part-time jobs. To examine attitude towards work, respondents were asked to rank a number of statements as to whether or not they agreed or disagreed with them.

Table 4.9 is a summary of data concerning attitude towards work. Almost

two out of five (38.6%) disagreed with the statement that they would not mind being unemployed for a while, Students were about evenly split on the question of whether they would take any job if they could earn $8 per hour: 38.3 percent agreed and 39.7 percent disagreed. Slightly over half (51.6%) of the respondents strongly agreed that workers should have the right to refuse to work under unsafe conditions. Almost half (49%) of respondents agreed that if they worked hard in school they were entitled to a good job. Respondents were just about split on the right to collect welfare/unemployment insurance benefits; 34.0 percent agreed and 36.3 percent disagreed. Respondents agreed to the right to a job for which they were trained and the right to refuse unreasonable shift work (53.4% and 53.1%, respectively).

In reviewing these responses there are many surprises. The general consensus is that many people feel that they have a right to welfare and unemployment insurance, yet 56.2 percent (36.3% + 19.9%) of the young respondents agree that there is no right to welfare and/or unemployment insurance benefits. This indicates that many young people want to make their own way by working to earn a living. Another unexpected finding was the large number, 60.8% (47.3% + 13.5%) of respondents who would be quite selective in the type of steady job they accepted. Given the uncertain economic climate and the decline in job opportunities within the past several months, it would be interesting to find out whether there would be significant differences in student responses if the survey were conducted today.

Table 4.9
Attitude towards Work

| Statements | Strongly Agree | Agree | Disagree | Strongly Disagree |
|---|---|---|---|---|
| Not mind being unemployed | 59<br>5.6% | 284<br>27.1% | 404<br>38.6% | 294<br>28.1% |
| Accept any job at $8 per hour | 137<br>13.1% | 401<br>38.3% | 416<br>39.7% | 90<br>8.5% |
| Do any work if steady | 78<br>7.4% | 331<br>31.6% | 495<br>47.3% | 141<br>13.5% |
| Right to refuse work under unsafe conditions | 540<br>51.6% | 357<br>34.1% | 91<br>8.7% | 59<br>5.3% |
| Worked hard in school entitled to good job | 289<br>27.6% | 513<br>49.0% | 188<br>18.0% | 57<br>5.3% |
| Right to welfare/ unemployment ins. | 98<br>9.4% | 356<br>34.0% | 380<br>36.3% | 208<br>19.9% |
| Right to job for which trained | 275<br>26.3% | 559<br>53.4% | 165<br>15.8% | 43<br>4.1% |
| Right to refuse shift work | 182<br>17.4% | 556<br>53.1% | 247<br>23.6% | 57<br>5.5% |

A chi-square test was used to measure the significance of the data for attitude towards work and whether there was a relationship between this data and transitional pathway. The results fell short of significance at the .05 level.

Leisure Time Activities

Leisure activities are an important developmental link for youth, not only in the acquisition of a capacity for enjoyment in serious and demanding adult activities, but also because they have important consequences for students' later attitudes, behaviour, and decisions. Respondents were asked to choose the ways in which they presently spend their leisure time. Table 4.10 is a summary of the responses given for leisure activities.

Descriptive information about leisure activities revealed that a majority of respondents spend their time hanging out or dating (38.9%); this translates into 45.6 percent of all female respondents and 33.0 percent of all male respondents. Almost 19 percent (18.6%) spend their leisure time working in the family business. The next most popular leisure time activity was participating in sports (14.9%), with more males (20.9%) doing so than females (8.6%). It is interesting to note that doing homework, watching television, and playing video games were just about even in responses, 7.9 percent, 8.1 percent, and 8.2 percent, respectively. Overall, almost two out of five of the respondents spend their time hanging out or dating and less than 3 percent spend their time volunteering or going to the movies.

Table 4.10
Distribution of Responses for Leisure Activities

| Statements | All students (n=1047) Freq. | Percent | Female (n=511) Freq. | Percent | Male (n=497) Freq. | Percent |
|---|---|---|---|---|---|---|
| Working in family business | 195 | 18.6 | 94 | 18.4 | 97 | 19.5 |
| Watching television | 85 | 8.1 | 41 | 8.0 | 42 | 8.5 |
| Hanging out/dating | 407 | 38.9 | 233 | 45.6 | 164 | 33.0 |
| Playing sports | 156 | 14.9 | 144 | 8.6 | 104 | 20.9 |
| Hobbies/Interests | 86 | 8.2 | 134 | 6.7 | 51 | 10.3 |
| Going to movies | 8 | 0.8 | 2 | 0.4 | 6 | 1.2 |
| Doing homework | 83 | 7.9 | 56 | 11.0 | 26 | 5.2 |
| Volunteering | 14 | 1.3 | 7 | 1.3 | 7 | 1.4 |
| (No response | 13 | 1.2) | | | | |

The leisure activities data and pathway identified were probed to see whether a relationship existed. Results ($X^2 = 42.55$, df = 21, p = < .003) show that there was a significant relationship at the .05 level between leisure activities and pathway. Leisure activities data were further examined to see whether a relationship existed between leisure activities and gender. The results of a Chi-square analysis ($X^2 = 52.57$, df = 7, $p < .001$) showed that there was a relationship between leisure activities and gender. The cell for hanging out and dating contributed the most to the chi-square. (Appendix I (f))

It seems that these activities provide variability, disrupt the pattern of students' thinking, and revitalize students' capacity to concentrate. Today's business organizations, knowing the importance of leisure activities, encourage participation in sports and other activities as new ideas or concepts are usually formulated during such participation. Socialization and dating allow students to exchange ideas and to talk about a host of topics, including their dreams. It is not

surprising, therefore, that the findings on leisure activities are so highly significant. A look at the dating cell ( Appendix I(f)) reveals that dating contributed the most to the chi-square. The high relationship between leisure activities and pathway, and leisure activities and gender is therefore not surprising.

Work habits

The work habits of students seem to be a useful predictor of later success. The consequences of not having the ability to organize a task and to perform it with alacrity could be the difference between acquiring, meeting, and receiving more responsibilities. Such additional responsibilities could lead to worker autonomy. Worker autonomy, according to Toffler (1990), encourages and fosters sound work habits.

Respondents were given a number of statements relative to work habits and were asked to rate them from "always" to "never" according to their perception of how well they met those criteria. Students were positive yet modest in their self-report. Almost three out of five (59.9%) said they were always tidy. Students were often timely (45.8%), can be depended on (42.2%), organized (41.4%), punctual (45.0%), proud of their work (41.4%), and took criticism well (42.8%). Responses on the "Never" scale were less than four percent with the exception of "Takes criticism well" (4.6%). Table 4.11 summarizes responses for work habits.

Table 4.11
Distribution of Responses for Work habits

| Statements | Always | Often | Sometimes | Never |
|---|---|---|---|---|
| Organized | 317<br>30.3% | 433<br>41.4% | 261<br>24.9% | 31<br>3.0% |
| Can be depended on | 353<br>33.7% | 442<br>42.2% | 228<br>21.8% | 22<br>2.1% |
| Work neatly done | 376<br>35.9% | 412<br>39.4% | 233<br>22.3% | 23<br>2.2% |
| Tidy | 627<br>59.9% | 316<br>30.2% | 87<br>8.3% | 14<br>1.3% |
| Takes criticism | 273<br>26.1% | 448<br>42.8% | 274<br>26.2% | 48<br>4.6% |
| Timely | 316<br>30.2% | 480<br>45.8% | 236<br>22.5% | 14<br>1.2% |
| Proud of work | 242<br>23.1% | 433<br>41.4% | 330<br>31.5% | 41<br>3.9% |
| Punctual | 365<br>34.9% | 471<br>45.0% | 193<br>18.4% | 17<br>1.6% |

To test for the significance of the relationship between work habits data and pathway, a chi-square analysis was done. Results showed that there were significant relationships between the work habit statements of "Organized" ($X^2$ = 33.60, df = 9, $p < .001$), "Can be depended on" ($X^2 = 21.60$, df = 9, $p < .010$), "Proud of work" ($X^2 = 36.18$, df = 9, $p < .001$), "Timely" ($X^2 = 26.12$, df=9, $p < .010$), and "Tidy" ($X^2 = 23.78$, df = 9, $p < .021$) and pathway at the .05 level. .

It would seem that the larger the value, the larger the relative discrepancy between the observed and expected frequencies on the chi-square analysis of the relationship between influential activities and pathway (see Appendix I (g)).

The findings on work habits are consistent with what is generally expected to function in any work environment, be it school or labour. While some work habits are more highly significant, for example, "being organized" and "proud of work," nevertheless, they are all important. As Toffler (1990) in *Powershift*, and Cohen & Stanley, (1993) in *No Small Change* emphasize, being organized and able to work quickly, and liking what we do are key elements that would allow us to function in the new information economy. These elements therefore are critical for students' future success and it is obvious that respondents are aware of them.

**F. Question 4. What are their job expectations?**

Future Lifestyle

The goals people set for themselves often serve as guides for action. Goals to which students aspire serve to point their sights in the general direction along which different paths lead. Often these goals affect students' attitudes or self-concept and are based on many factors which affect their perceptions of their future lifestyle. Many of these factors are value based. Farmer (1986) in a study of career achievement and motivation for men and women found that the motivating factors for future achievement were aspiration and the mastery of or commitment to a certain lifestyle.

Studies on self-concept (Marsh, 1986; Shavelson & Bolus, 1982; Gottfredson, 1981) claimed that academic self-concept is influenced by a student's perception of his or her academic achievement. Sharpe & Spain (1991) found that a large percentage of students' lifestyle included a job or career within five to ten years of his survey. Therefore, students' self-concept and perception are determinants in their future lifestyle. Students were given a number of future lifestyle statements and asked to rate, according to their own perceptions, how important they were.

Table 4.12 is a summary of percentage response for future lifestyle. Of the respondents 60 percent indicated that it was very important to "find enjoyment in their work," 57.3 percent wanted "to excel in chosen career," 47 percent wanted a "long-term job that was personally rewarding," 44.1 percent wanted "the possibility of getting jobs that will give security, flexibility and independence," and 38.4 percent wanted "to get a high-paying job." Almost two out of five (39.5%) felt that doing community work was somewhat important. Keeping a good household (homemaker) was considered somewhat important by 35.1 percent. Therefore, it seems that a positive self-concept is related to excelling in

one's career, enjoying one's work, and having a long-term rewarding job. These are all variables that would promote a healthy lifestyle.

The data indicate that there were few differences in the lifestyle aspirations of males and females. Among them, more females (50.5%) than males (43.2%) felt that it was very important to have a long-term rewarding job; as well 4 percent more females than males wanted to excel in their chosen career (59.3% and 55.3%, respectively). In all areas of responses females scored higher than males, with the exception of being a good homemaker (females n=144, 27.7%, and males n=177, 35.6%) and to secure a high-paying job (females n=175, 33.8%, and males n=217, 43.4%).

Overall, three out of five students wanted to find enjoyment in their work which translates to 63.3 percent of the females and 57 percent of the males. Being a good homemaker was fairly important to 35.6 percent of the males, as compared to 27.7 percent of the females. The latter was surprising, as one would have thought that a larger percentage of females would have identified this as being important; however, one can attribute this to societal changes regarding equity in household affairs.

Table 4.12
Percentage Distribution for Responses to
Future Lifestyle

| Statements | Not Important | Somewhat Important | Fairly Important | Very Important |
|---|---|---|---|---|
| Have long-term rewarding job | 48<br>4.6% | 151<br>14.4% | 354<br>33.8% | 492<br>47.0% |
| Get occupational skills at school | 53<br>5.1% | 246<br>23.5% | 476<br>45.5% | 270<br>25.8% |

Table 4.12 Continued

| | Not Important | Somewhat Important | Fairly Important | Very Important |
|---|---|---|---|---|
| Excel in chosen career | 48<br>4.6% | 111<br>10.6% | 284<br>27.1% | 600<br>57.3% |
| Do community work | 149<br>14.2% | 414<br>39.5% | 347<br>33.1% | 135<br>12.9% |
| Keep a good household (homemaker) | 130<br>12.4% | 368<br>35.1% | 331<br>31.6% | 214<br>20.4% |
| Flexible job that allows independence | 59<br>5.6% | 178<br>17.0% | 345<br>33.0% | 462<br>44.1% |
| Enjoyment in work | 64<br>6.1% | 134<br>12.8% | 214<br>20.4% | 628<br>60.0% |
| Secure high-paying job | 79<br>7.5% | 223<br>21.3% | 339<br>32.4% | 402<br>38.4% |

Chi-square test results showed that there were two significant relationships in the future lifestyle data and pathway. Results of the chi-square analysis showed that doing community work ($X^2 = 29.48$, $df = 9$, $p < .001$) was significant at the .05 level, and keep a good household (homemaker), ($X^2 = 15.29$, $df = 9$, $p > .083$) was significant at the .10 level (see Appendix I (h).

The data for Future Lifestyle were further examined with regard to ascertaining whether there were significant relationship with gender. The chi-square test results showed that the following future lifestyle statements showed a significant relationship with gender: keep a good household ( $X^2 = 10.81$, $df = 3$, $p < .012$); enjoyment in work ($X^2 = 11.03$, $df = 3$, $p < .011$) , do community work

($X^2 = 33.39$, df = 3, $p < .001$), and secure high-paying job ($X^2 = 11.03$, df = 3, $p < .011$). The relevant chi square tables are presented in Appendix I(h).

**G. Question 5. What internal factors - those which exist within the school setting - are influencing youths' choice of career?**

Internal Influences

The type of diploma program students are enrolled in and the grades students have attained usually influence their plans for after high school, especially the choice of an occupation. Dowsett (1990) found that there was a significantly higher level of achievement by those who planned to attend university than those who planned to attend college or a technical institute. However, Little (1967) noted that differences in high school performance had very little effect on the level of occupations attained. While some of the literature can be considered contradictory, program and average grades attained are generally thought to have an influence on students' transitional pathway.

Program

Respondents were asked to identify the diploma program they were presently taking. Table 4.13 is a summary of the percentage distribution of responses to the question. Almost two-thirds of the students (62.3%) were enrolled in the Advanced Diploma Program. Nearly sixty-six percent (65.8%) of all female respondents (340/517) were enrolled in the Advanced diploma program and 58.5 percent of all male respondents (288/492) were in the Advanced diploma program. Of the 381 (37.7%) students enrolled in the General Diploma Program, 34.2 percent (177/517) were female and 41.5 percent (204/492) were male. According to the responses, more females (7.3%) than males were registered in the

Advanced Diploma Program, and more males (7.3%) than females were registered in the General Diploma Program.

Table 4.13
Distribution of Responses for Program

| Program | Total (N=1010) Freq. | Percent | Female (N=517) Freq. | Percent | Male (N=492) Freq. | Percent |
|---|---|---|---|---|---|---|
| Advanced | 629 | 62.3 | 340 | 65.8 | 288 | 58.5 |
| General | 381 | 37.7 | 177 | 34.2 | 204 | 41.5 |

The data for the program enrolled in were examined for significance using the chi-square test. Results ($X^2 = 44.38$, $df = 3$, $p < .001$) indicated there was a strong relationship between program and pathway identified. This chi square result and its significant $p < .001$ leads to the conclusion that Advanced Diploma Program and General Diploma Program are significantly different across the categories of pathways (Appendix I(i)) This finding concurs with the literature that the program in which students are enrolled is significantly related to the transitional pathway selected.

Further examination of Distribution of Responses for Program data for a realtionship with gender indicated that, the chi-square results ($X^2 = 5.60$, $df = 1$, $p < .018$) indicated a significant relationship between the educational Diploma Program students were enrolled in and gender (Appendix I (i)).

Grades

Another factor influencing the transition from school to work or further

education is grades. According to the literature (Cathcart, 1967; Barker, 1972; West & Newton, 1983; Dowsett. 1990) school achievement was important in determining the transition route selected by students.

Respondents were given several grade ranges and asked to identify a range which best described their average grade. Table 4.14 is a summary of the percentage distribution of the responses.

The 65-79 grade range had the largest (41.8%) number of respondents; 40.1 percent of all female respondents were in this grade range and 42.5 percent of all male respondents were in that grade range. The next largest number was in grade range 80-100 which consisted of 38.5 percent of respondents. In terms of numbers, there were 28 more females than males in this 80-100 grade range. The grade range 50-64 included 14.9 percent of respondents. The lowest grade range, 0-49, included 4.8 percent of respondents. There were three more females than male in this grade range. Overall, the highest grade range, 80-100, as well as the lowest grade range, 0-49, comprised more females than males.

Table 4.14
Distribution of Responses for Grades

| Grades | Total (N=1044) Freq. | Percent | Female (N=519) Freq. | Percent | Male (N=497) Freq. | Percent |
|---|---|---|---|---|---|---|
| 80 - 100 | 402 | 38.5 | 215 | 41.4 | 187 | 37.6 |
| 65 - 79 | 436 | 41.8 | 212 | 40.1 | 211 | 42.5 |
| 50 - 64 | 156 | 14.9 | 69 | 13.2 | 79 | 15.8 |
| 0 - 49 | 50 | 4.8 | 23 | 4.4 | 20 | 4.0 |

A chi-square test was used to measure the significance of the Grades data in relation to pathway. Results ($X^2$ test = 26.02, df = 9, $p < .010$) show that there

was a significant relationship between grades and pathway identified. (Appendix I (j)).

The data were further probed to see whether a relationship existed between Grades and gender and if so how significant was it. The results showed that grades were not signficantly related with gender.

The findings in this study show that, in most cases, grades had a significant influence on the transitional pathway chosen, and this is consistent with Keyote's (1971) study of a rural Alberta high school, and Narine's (1971) study of an Edmonton high school. Both found that differences in high school achievement were related to student's decisions about whether or not to attend a university, technical institute, or college. Collett's (1981) study, *Monitoring a School System*, also found that students with plans to attend university received higher marks.

Extracurricular Activities

According to the research literature, the activities that students engage in can be either constraints on or facilitators of educational aspirations and attainments (Sewell & Hauser, 1975; Porter et al., 1982; Lam, 1982; Carpenter & Western, 1982; Davis, 1985; and Carpenter & Fleishman, 1987). School activities influence youths' aspirations and attainment as well as the nature of friendships (Coleman et al. 1982).

The influence of informal or extracurricular high school activities on students' transition from school to employment and/or higher education was based on ten Likert scaled items. Respondents were given ten activity statements and asked to rate them to show how much influence these activities had on their plans for the future. Table 4.15 is a summary of responses for those activities.

When the top two levels of the scale, that is, very strong influence and strong influence are collapsed into one level, the table shows that almost 50

percent (44.8%) of the respondents indicated that clubs, (for example, subject matter, debating, and hobby clubs) had a strong influence in their decision. More than one in four (30.3%) of the respondents indicated that sports, (interschool and intraschool), had a strong influence in their decision.

Respondents reported that the activity of volunteer organization, 24.5 percent; student council, 24.1 percent;, school newspaper, magazine/yearbook, 23 percent; religious organization, 18.8 percent and musical band, 18.4 percent had little influence in their decision.

Examination of the data also showed that more females (53.3%) than males (46.7%) were strongly influenced by clubs. However, the reverse was observed in sports; 53.8 percent of males compared with 46.3 percent females were strongly influenced by sports activities. More males (72.7%) and females (27.3%) were strongly influenced on the activity of "musical band." Respondents to the activity religious organizations were females 10.4 percent and males 11 percent. Volunteer organization activity and school newspaper, yearbook were almost two to one in favour of females (18.5% females, 9.8% males, and 8.3% females, 3.8% males, respectively). Being a member of student council strongly influenced the decision of 6 percent of the females and 4.8 percent of the males.

The revelation of the findings is what was expected and fits with the general thinking that men are more interested in sports than women; and women are more interested in language arts, as evidenced by school newspaper/yearbook activities. However, what was surprising was the large percentage of females who reported that their membership in clubs strongly influenced their decision, because clubs included, among other things, mathematics, science, and computer. Even when the other clubs were isolated, there were more females (3.2%) in the mathematics, science, and computer clubs than males.

Table 4.15
Distribution of Responses for Extracurricular Activities

| Activities | No Influence % | Little Influence % | Strong Influence % | Very Strong Influence % |
|---|---|---|---|---|
| Student Council | 70.5 | 24.1 | 4.3 | 1.1 |
| Interschool sports | 54.0 | 27.0 | 11.6 | 7.4 |
| Intraschool sports | 64.6 | 24.2 | 7.8 | 3.5 |
| School newspaper, magazine/yearbook | 68.8 | 23.0 | 6.0 | 2.2 |
| Subject-matter clubs, e.g. science/math/computers | 52.8 | 25.2 | 15.2 | 7.6 |
| Debating/dramatics | 60.1 | 25.2 | 10.0 | 4.7 |
| Band/orchestra/choir | 72.5 | 18.4 | 5.9 | 3.2 |
| Hobby clubs | 74.1 | 18.6 | 5.2 | 2.1 |
| Religious organization | 70.5 | 18.8 | 7.3 | 3.4 |
| Volunteer organization | 61.2 | 24.5 | 10.0 | 4.2 |

The extracurricular activities were examined to see whether a relationship between extracurricular activities and pathways existed, and if a relationship existed, how significant was the relationship. Chi-square test results show that there were many significant relationships between extracurricular activities and pathway (Appendix I (k)). These extracurricular activity statements of significance were: student council ($X^2 = 18.91$, $df = 9$, $p < .025$), school newspaper, magazine/yearbook ($X^2 = 20.46$ $df = 9$, $p < .015$), subject matter ($X^2 = 23.50$, $df = 9$, $p < .005$), debating/dramatics ($X^2 = 20.20$, $df = 9$, $p < .016$).

The extracurricular activities data were further probed through chi-square analysis for significance of relationship with gender. The results of the analysis showed that there were significant relationships between several extracurricular activities and gender. These activities were: interschool athletic team, $X^2 =$

29.37. df = 3, $p < .001$; intraschool athletic team $X^2 = 22.33$, df = 3, $p < .001$; school, newspaper, etc. $X^2 = 11.41$, df = 3, $p < .009$; debating, dramatics, etc. $X^2 = 19.93$, df = 3, $p < .001$; band, orchestra, choir $X^2 = 13.44$, df = 3, $p < .003$. The chi-square tables are in Appendix I (k).

The type of program, in most cases, and grades were influential in the decisions of respondents and as such related to transitional pathways identified. This finding is consistent with those of West and Newton (1983), Dowsett (1990), Sharpe & Spain (1991), and Weis, (1990), who have shown that grades are significant factors in determining transition to work or further education. Coleman et al. (1982) also found that school activities have a significant influence on students' decision making.

Cathcart (1967) and Barker (1972), in their study of Grade 12 students in the Alberta school system, found significant relationships between the program, the average grades, and the post-secondary plans of students. They observed that the majority of students who were enrolled in the matriculation program had attained average grades of between 50 percent and 80 percent, and intended to continue their education after graduation from high school.

### H. Question 6. What external factors - those which exist outside the school setting - are influencing youths' choice of career?

Significant Other

According to Hendry et al. (1993), the family is the most influential social institution in the development of the individual. Sewell et al. (1969) in their study of senior high school students, found that parents, teachers, and the college plans of friends directly affected their educational plans. Parents and teachers act as role models, in among other things, setting standards for cognitive and self-concept development and achievement. Another researcher (Roberts, 1980) noted that

peers and friends provide encouragement and support and convey information necessary for making decisions. Thus peer affiliation can be viewed as an influence complementary to that of parents (Elkin & Handel, 1978).

Other researchers (Friesen, 1966; Narine, 1971; Furlong, 1992 as cited in *Growing up in a Classless Society*; Dowsett, 1990) have found that significant others such as parents and peers, in particular, have an impact on the manner in which students make the transition from high school. To evaluate the effect of the influence of significant others on students, a list of significant others, both within the school system, and outside the school system, was given to students to rate. The frequency and percentages of students' responses are presented in Table 4.16. Across the nine categories of significant others, 40.1 percent of respondents indicated "Other" (e.g., no one, magazine, media). When the "other" category is ignored because of its many entities, 28.1 percent of respondents indicated their parents were the primary significant other to influence their career selection; 7.4 percent indicated friends, another 7.3 percent indicated a person on the job, and 7.1 percent indicated relatives who influenced their choice of aspirations. In contrast, the school was less important; 5 percent relied on teachers or counsellors and less than 1 percent (0.9%) on the principal or assistant principal. Females (28.5%) of all female respondents were more often influenced by parents than males (27.6%); males (8.5%) were more influenced by friends than females (6.4%); and females, n=38/519, (7.3%) and males n=36/495, (7.3%) were about evenly influenced by persons on the job.

The low value for principals and assistant principal is understandable, as they are the disciplinarians. However, the low value for teachers and counsellors is somewhat surprising, as it contradicts a generally held belief that teachers and counsellors were important significant others in students' lives. Three possible causes could account for this finding. First, the students in this study simply did

not believe the opinions of teachers and counsellors were important. Perhaps the students viewed the educational personnel as not being truly understanding or caring, or as being too "out of touch" with the students' lives. A possible defense for the educators is too much work for too few personnel. Regardless of the explanation, the fact was that counsellors and teachers had a very low relative value in terms of influence on post-graduation aspirations. This should be viewed as strikingly disturbing and worthy of intense scrutiny.

Table 4.16
Distribution of Responses for Significant Other Influence

| Influence | Total (N=1047) Freq. | Percent | Female (N=519) Freq. | Percent | Male (N=495) Freq. | Percent |
|---|---|---|---|---|---|---|
| Parents | 294 | 28.1 | 148 | 28.5 | 137 | 27.6 |
| Other relatives | 74 | 7.1 | 38 | 7.5 | 34 | 6.9 |
| Friends | 77 | 7.4 | 33 | 6.5 | 42 | 8.6 |
| Teacher/guidance counselor | 52 | 5.0 | 24 | 4.8 | 26 | 5.3 |
| Person on the job | 76 | 7.3 | 38 | 7.5 | 36 | 7.3 |
| Principal/assistant principal | 9 | 0.9 | 3 | 0.6 | 5 | 1.0 |
| Career fair representative | 15 | 1.4 | 9 | 1.8 | 4 | 0.8 |
| College or univ. student | 12 | 1.2 | 8 | 1.7 | 4 | 0.8 |
| Other | 420 | 40.1 | 205 | 40.7 | 207 | 42.2 |
| (No response | 19 | 1.8) | | | | |

Probing the Significant Other influence data and pathway for significant relationship, chi-square results ($X^2 = 36.05$, df = 24, $p < .054$) show that there was

a relationship between significant other influences and pathway. The data for significant other and pathway provide fairly conclusive evidence that a significant relationship exist. (Appendix I (l)

The data for the Distribution of responses for the influence of Significant Other were further probed to see whether there was a relationship with gender. The chi-square analysis revealed that there was no relationship.

Locus of Control

The strong influence of families is well documented in the research literature (Moss & Rutledge, 1991). In particular, status attainment studies document the primary role of parents in helping children establish educational aspirations and accomplish their goals, while most research on the home-school linkage focuses on how families facilitate or impede their children's educational progress (Gaskell & McLaren, 1987).

Respondents were given eight statements and asked to identify which one best described what their parents/guardian thought they should do after leaving school. The responses summarized in Table 4.17 indicate that almost six in ten (37.7% + 21.2% = 58.9%) of respondents indicated that their parents insisted and definitely wanted them to continue their education. A fifth of the respondents (20.8%) indicated that they made the future plans with parental input. A small percentage of respondents' parents (5.7%) did not advise their children what to do.

Overall, indications are that the majority of parents want their children to continue their education after high school. This is not surprising, given that parents were the most helpful in determining respondents' career plans (see Table 4.16). Only 3.1 percent of students indicated that their parents "do not care" what their children do after high school and an even smaller percentage (1.9%) indicated that their parents would want them to "find a job."

Table 4.17
Distribution of Responses for Parental
Agreement/Disagreement with Student Plans

| Choices | Total (N=1047) Freq. | Percent | Female (N=518) Freq. | Percent | Male (N=499) Freq. | Percent |
|---|---|---|---|---|---|---|
| Definitely continue my education | 395 | 37.7 | 205 | 39.6 | 180 | 36.0 |
| Insists continue educ. | 216 | 21.2 | 107 | 20.7 | 102 | 20.4 |
| Does not care | 32 | 3.1 | 16 | 3.1 | 16 | 3.1 |
| Might like me to continue education | 95 | 9.1 | 43 | 8.3 | 48 | 9.6 |
| Find a job | 20 | 1.9 | 5 | 1.0 | 15 | 3.0 |
| Work in family business | 8 | 0.8 | 1 | 0.2 | 7 | 1.4 |
| Personal choice with input | 218 | 20.8 | 115 | 22.2 | 98 | 19.6 |
| Not told me | 60 | 5.7 | 26 | 5.1 | 33 | 6.6 |
| (No response | 3 | 0.3) | | | | |

A chi-square test was used to measure the significance of the data. Results ($X^2 = 39.86$, df=21, $p < .007$) showed that there was a significant relationship at the 0.5 level between parental support for students' plans and pathway. The data for parental agreement/disagreement with student plans were further checked through a chi-square test. The results showed no significant relationship with gender at the .05 level. (Appendix I (m)).

**I. Other Influences**

Respondents' age, gender, family size, and home situation were examined in terms of the influence these factors may have on career decisions. Of these

factors, only gender and home situation were found to be significant in students' transitional pathways.

Age

Age was categorized into five ranges: 15 and under, 16, 17, 18, and 19 and over. Table 4.18 summarizes responses according to age.

Table 4.18
Distribution of Responses According to Age

| Age | Frequency (N=960) | Percent 100 |
|---|---|---|
| 15 and under | 94 | 9.8 |
| 16 | 496 | 51.7 |
| 17 | 275 | 28.6 |
| 18 | 64 | 6.7 |
| 19 and over | 31 | 3.2 |

Gender

Central to any discussion of the transition from school to employment and/or further education is the recognition that both school and work experiences vary by gender. Researchers Porter et al. (1982) and Baker (1985) noted that while females out-perform males in school, their transitional pathway identification into work or further education is usually different than males. Mandell and Crysdale (1993) further reported that women are disproportionately found in the academic stream, and that they are clustered in the vocational stream in business courses.

Studies confirm that the gender stereotyping of occupations affects both men and women. Women are more likely to aspire to traditionally male-

dominated occupations than men are to female-dominated ones (Looker & McNutt, 1989). However, both recognize gender segregation in the world of work. The irony of gender segregation in the world of work becomes more pronounced when one examines the other side of the transition: the world of school. Several studies have shown that girls perform better than boys in school (Ambert, 1976; Baker, 1985; Porter et al. 1982).

The research literature has documented that status attainment is one of the main predictors of occupational attainment, although less so for women than men (Turritin et al. 1983). Further, several researchers have documented the importance of family and other relationships to women (Baker, 1985; Kerckhoff, 1990; Maizels, 1970). Considering that the family relationship is primary with women, then the observation of a strong parental influence in girls' career choices is not unusual. Strong evidence (Lindsey, 1990; Richmond-Abbott, 1992) suggests that girls do not receive the same messages as boys, even when there was only one message conveyed to both at the same time.

Canadian studies (Moss & Rutledge, 1991) indicate that the majority of parents are ambitious and interested in their children's success. Krahn and Lowe, 1991; Tanner 1991) and American (Weis, 1990) studies note that even when children dreams are hopelessly unrealistic given their marks or academic concentration, both boys and girls still "desire" higher education. Yet the nature of the support parents give boys apparently differs from that given to girls.

Sadker et al. (1986), Lindsey (1990), and Richmond-Abbott (1992) have found that girls often seem unclear as to their abilities and the quality of their answers, while boys have a stronger self-image and tend to be more satisfied with their personal lives. Whyte et al. (1985), Lindsey (1990), and Gaskell and McLaren (1987) suggested that the reason why the aspirations of girls seem limited in relation to their qualifications is a function of numerous structural and

interpersonal dynamics which are invisible to youth, teachers, and parents.

As stated previously, along gender lines respondents were 49.7 percent female and 47.8 percent male. Some of the respondents (2.5% ) omitted to identify their gender. The frequency and percentage of respondents are summarized in Table 3.1.

A chi-square test was used to measure the significance of the data. Results ($X^2 = 81.16$, $df = 3$, $p < .001$) showed that there was a significant relationship at the 0.5 level. This result indicates that a strong relationship exists between gender and the choice of a pathway (Appendix I (n).

Family Size

The number of siblings in a student's family can have an impact on what he or she plans to do after leaving high school (Dowsett, 1990; Sharpe & Spain, 1991). Participants in this study were asked the number of siblings in their family. Their responses are summarized in Table 4.19. Respondents who reported no siblings or only one sibling were considered to be from a small family; those who reported two siblings were considered to be from an average family; students who reported three siblings were considered to be from a large family; and respondents who reported four or more siblings were considered to be from a very large family.

The largest percentage (37.5%) of respondents came from small families. Average families accounted for 36.2 percent of respondents, large families accounted for 13.4 percent, and very large families for 12.7 percent. According to the responses, more females reported that they came from a small family (38.9%). Females responses also indicated that they came from very large families (13.7%). There were more male respondents in the average family (36.9%) and in the large family (13.8%).

Table 4.19
Distribution of Responses for Number of Siblings

| Siblings | Total (N=1047) Freq. | Percent | Female (N=519) Freq. | Percent | Male (N=499) Freq. | Percent |
|---|---|---|---|---|---|---|
| Small | 393 | 37.5 | 202 | 38.9 | 186 | 37.3 |
| Average | 379 | 36.2 | 180 | 34.7 | 184 | 36.9 |
| Large | 140 | 13.4 | 66 | 12.7 | 69 | 13.8 |
| Very large | 133 | 12.7 | 71 | 13.7 | 60 | 12.0 |
| (No response | 2 | 0.2) | | | | |

Number of siblings data were examined for significance using a chi-square test. Results showed that there was no significant relationship between number of siblings and pathway. The finding that family size did not have an impact on career decision is contrary to the generally held belief; however, this finding is consistent with those of Narine (1971).

Living Arrangements

As stated earlier, the family is acknowledged to be the most significant influence on the development of the individual student; however, Hendry et al. (1993) caution against viewing the family as a static social institution. Altered patterns involving divorce and re-marriage have led to different needs and living arrangements for many adolescents. Landis, (1970) and Havighurst and Ahlstrom (1971) have shown that young people are often "better off" living with one "supportive" parent than with two who bicker and disagree continually.

The data from this study show that among the respondents 79.9 percent lived with both parents; 11.1 percent lived with a mother only, and less than 5 percent (4.3%) lived with a father only. Of the remainder, 3 percent lived with

relatives and a small number, 1.2 percent, lived alone. Thus less than one-fifth of the respondents were living in a family situation other than the traditional nuclear family (Table 4.20).

Closer examination of the data revealed that more females (12.5%) of all female respondents and more males (9.8%) of all male respondents lived with a mother only than with a father only. Respondents who lived alone (away from home) were evenly distributed between females and males (1.2% and 1.4%, respectively). Also noticeable was the fact that more females (2.8%) than males lived in arrangements other than two parent family.

Table 4.20
Distribution of Respondents' Home Situation.

| Living arrangements | Total (N=1047) Freq. | Percent | Female (N=518) Freq. | Percent | Male (N=498) Freq. | Percent |
|---|---|---|---|---|---|---|
| Both parents | 837 | 79.9 | 417 | 80.5 | 394 | 79.3 |
| Relatives/friends | 31 | 3.0 | 18 | 3.5 | 13 | 2.6 |
| Alone | 13 | 1.2 | 6 | 1.2 | 7 | 1.4 |
| Mother only | 116 | 11.1 | 66 | 12.7 | 49 | 9.8 |
| Father only | 45 | 4.3 | 11 | 2.1 | 34 | 6.8 |
| (No response | 5 | 0.5) | | | | |

Home situation data were probed using chi-square to see whether a significant relationship existed between home situation and pathways Chi-square results ($X^2 = 37.92$, $df = 12$, $p < .001$) showed that there was a significant relationship at the 0.5 level (Appendix I(o)).. The results confirm that a strong relationship exists between home situation and pathways.

The data for home situation were further examined to observe a significant relationship existed between home situation and gender. Results of the chi-square analysis ($X^2 = 15.38$, $df = 4$, $p < .004$) showed that there was a significant relationship between home situation and gender (Appendix I(o).

**J. Question 7. What is the process through which youths select a career?**

Decision Process

Respondents used a variety of considerations to assist in their career decisions. These included getting into the right program, maintaining good grades, and taking advantage of part-time work. Respondents also utilized leisure time and their involvement in extracurricular activities such as sports and clubs to assist them in the decision-making process.

Further, respondents' knowledge of the work force, though limited, and their job aspirations and self concept have been instrumental in the decision-making process. A process which will facilitate youth transition from school to work and or further education.

**K. Summary**

The purpose of this chapter was to present the findings of the survey instrument and to identify significant relationships between specific variables and identified pathway. The chi-square analysis was used to test the significance of the relationships investigated in this study.

Of significant importance were the relationships between the period of time spent contemplating a career and the chosen pathway. Many respondents

contemplated their career choice more than two years in advance, and according to development theorists the process involved is significant.

Work knowledge, particularly in reference to the jobs of clerk in a store, mechanic, beautician, computer systems analyst, janitor/custodian, and nurse were found to be significant in relation to pathways. However, students' work knowledge was found to be limited to lower-level occupations.

Part-time work, while beneficial to students from a monetary aspect, was not found to be significant in relation planned pathways but was significant in relation to gender. The number of hours worked, the length of time working parttime and the reasons for working parttime were not found to be significant in relation to pathway, they were however significant in relation to gender. Surprisingly, no significant relationship was found between students' attitudes towards work and their chosen pathway. Leisure activities and work habits were found to be highly significant in relation to pathway. Only two future lifestyle statements, "doing community work" and "being a good homemaker" were found to be significant in relation to pathways; the latter was selected by a greater proportion of the males. Future lifestyle activities of excel in chosen career, and keep a good household were significant in relation to gender.

The relationship between the educational program in which students were enrolled and the grades attained was found to be highly significant, in terms of pathway identified and gender. School activities such as sports had a heavy concentration of males. The extracurricular activities involving debating clubs and school yearbook had the most females.

An examination of family influence on students' decision making showed that the variables of significant other, parental support for student choices, and home situation were significant in realtion to pathways and gender. However, age

and size of family were not significant. The relationship between gender and pathway was highly significant.

# Chapter V

# CONCLUSIONS AND IMPLICATIONS

## A. Introduction

The purpose of this study was to investigate the social, psychological and economic variables which influence influence the career decisions of youth and to identify the variables which play a significant role in the transition from school to employment and/or further education. One thousand forty-seven students from the high schools of Alberta were randomly selected.

A measure called the *Youth Transition from School to Employment and or Further Education: An Alberta Perspective* was designed for the study. Its reliability and validity were established.

## B. Conclusions

The major findings of this study are as follows:

Career. Many students were able to identify a career that they wished to follow, while a significant number were unable to do so. Those who were able to identify a career have been contemplating their choice for two or more years.

This investigation found that many students were able to identify a career, as discussed in the previous chapter, and these students in most cases had been contemplating that career for more than two years. Popular career choices were in the fields of health, teaching, and sports.

This investigation also found that one-fifth of the students did not identify a career. The reasons varied - "don't know," "I haven't a clue," "undecided," "help!" "What's out there to decide for?", and the many empty spaces on the response sheet show that students need and would like assistance in career guidance. The inability to identify a career choice for whatever reason or, rather, the absence of

career choices, provides additional clues about how youth actually go about making their choices and how their entry into the work force unfolds.

Knowledge of occupations. Students knowledge of occupations was limted. This investigation found that students were knowledgeable about some occupations. Unfortunately, except for two occupations from the list provided, the occupations that students were knowledgeable about were all at the skills level of "clerk in store." This is not surprising, because students tend to find employment in low-skilled positions where the turnover is very high, wages low, and working conditions poor.

Part-time work. A large number of students were working part-time. The main reason given for working part-time was to buy luxury items.

The findings about the influence of hours of part-time work per week, length of working part-time and reason for working part-time were significant in relation to gender. However, the findings about the influence of part-time employment were not significant in relation to planned pathways. From general observations there seem to be a contradiction. It seems inconceivable that working part-time for as much as twenty hours or more every week would not have an effect on grades, especially when an average person in a nine-to-five occupation usually complains of being fatigued and finds it difficult to take on added responsibilities such as attending evening classes. On reflection, it is possible that students who work part-time were taking fewer courses. However, there are other students who did not work part-time. It would be interesting to monitor and compare these two categories of students to find out if there is a difference.

Attitude towards work. This was found not to be statistically significant in relation to pathways. Students' attitudes towards work, while not negative, showed no statistical significance. This is contradictory, especially when viewed with the variable work habits. It seems to the writer that if work habits are positive they

are as a result of having a positive attitude towards work.. Therefore, attitude towards work and work habits should both be significant in career planning. As well the finding is contrary to the norm, and the reason perhaps may be attributed to the design of the questions. Students were, however, very decisive as to under what conditions they would accept a job; as well, they were very knowledgeable about their rights. One student who attempted to unionize his co-workers at a popular hamburger establishment.

Leisure-time activities. Leisure-time activities were highly significant, some more than others, in relation to the pathway respondents identified. Leisure activities especially "hanging out" and "dating" were found to be statistically significant. Generally, young people are castigated about their frivolous nature and the need to put their time towards more productive use is stressed, but the benefits young people derive from leisure activities cannot be quantified. Leisure time activities aid the process of transition and this was borne out in this investigation.

Work habits. Students' work habits were positive. Work habits were found to be statistically significant in relation to pathways. This is not surprising because the overall grades achieved by students tended to be high. A large number of students worked part-time. To do well in either or both of these situations require organization, punctuality, timeliness, and the ability to deliver a good product.

Future Lifestyle. The future lifestyle statement "keep a good household (homemaker)" was fairly more important to males than to females. This investigation found future lifestyle statements, do community work, and keep a good household to be statistically significant. Interestingly, the statement "keep a good household" was more important to males than females. This has immense connotations. To aspire to a lifestyle that embodies a good homemaker or doing

community work is symbolic of aspirations through which honour, prestige, and social standing can be perceived and affirmed.

With society's push for equality, a lifestyle that includes being a good homemaker can only enhance one's stature, as it encapsulates the caring, sensitive, and well-adjusted individual. The young person's behaviour, attitudes, values, and orientation are therefore good predictors of future lifestyle.

Program. The educational program in which students were enrolled was significant in influencing their career decisions. With regard to the impact of the program, more students were enrolled in the Advanced Diploma Program, which generally provides the credentials necessary for admission to a university or community college. More students aspired to attend a university or technical institute than to pursue any of the other options. Students aspiring to attend college were (3.4%) less when compared to students selecting other post-secondary choices.

Grades. A greater proportion of females tended to be clustered at the top and at the bottom of the grade scale. According to the findings, 80.3% of students were meeting the requirements for university entrance or better. Out of the four levels on the questionnaire there were more females at the top level and at the lowest level. Finding that there were a greater number of females at the top grade level is not contrary to the generally held belief that academically females tend to out perform males.

Influence. Parents were influential in their children's career decisions, supported their plans, and generally insisted that they continue their education. Teachers and counsellors had very little influence on students' career decision making.

This investigation found that parents were the primary people to influence students in their goal selection, followed by friends. Teachers and counsellors had

little ability to influence students.

As reported in the previous chapter, the opinion of parents was most valued by students making decisions (Table 4.25). That was not an unexpected finding because parents usually provide the biological, financial, and emotional support to children as they mature. Thus, parental involvement in facilitating the career development of their children remains significant compared with that of school counsellors. Nurturing parents allow students to take risks (e.g., make independent decisions); and these students know that their parents are there to support their decisions or act as facilitators to assist in problem solving.

Peers and friends also play an important role in student decision making. They are there to bounce ideas off, usually have common goals and interests and serve as confidants. As Kandel and Lesser (1972) noted, parental influence is stronger than that of a friend, but a friend's opinion is more valued when lifestyle issues are concerned.

Teachers and counsellors do not appear to be very influential in helping students to make intelligent career choices. This finding is contrary to the general belief that teachers and counsellors are significant others in students' lives. Students' low regard for the opinions of educational personnel could be related to the confounding effects of teachers' and cousellors' opinions in relation to those of others such as parents, friends, and peers; or to counsellors' inability to keep up with their workloads.

One speculates, then, as to where the counsellor fits in that scheme. Perhaps an important facet in this situation is the feedback counsellors and teachers provide to parents for the development and maintenance of the academic self-concept of students. Nevertheless, it is still disconcerting to know that counsellors who are primarily responsible for giving guidance to students are not being valued by the people whom they serve.

Extracurricular activities. Extracurricular activities such as sports and clubs influenced students' career plans. These were found to be significant in relation to pathways and gender. In particular, extracurricular sports were highly influential with males in their decision making. It is not surprising that more boys than girls were influenced by this phenomenon, as generally more males are involved in sports.

A surprise finding was that females tended to participate in more clubs than males, especially in science clubs. A generally held belief is that females are weak in hard science and do not aspire to careers in this field; however, the fact that they are involved in clubs of such a nature is contrary to popular belief.

Other Influences. Of the four variables, age, gender, family size, and home situation, included in this category only gender and home situations were significant in terms of career decision plans.

Age. A student's age was not found to be an important factor in career planning. This is not surprising as in today's society age seldom acts as a barrier to educational achievement.

Gender. Gender was found to be important in terms of career choice, influences, program grades, and leisure activities such as membership in clubs.. Not surprising was the gender differentiation in the transition process. The findings found that females' academic achievement was usually high. Their social interaction also was high, as evidenced by their participation in activities such as debating and science clubs. There were also indications that females tended to rely on the advice of "significant others." The findings also showed that females were less likely to identify a university pathway. Their attitude may also reflect the existence of basic social inequality between men and women. It should be noted, however, that some females in this study tended to veer away from stereotypes by selecting occupations from the physical and natural sciences, such

as engineer, astronaut and oceanographer, as well as the occupations of lawyer, dentist, and doctor, which are in line with their academic ability.

Family size. This variable was also not found to be influential in career planning. This was contrary to the generally held belief.

It was surprising that family size did not have an impact on students' decisions. It can only be surmised that what may be at work is a complex interplay between the financial and cultural resources of a family along with other remote external variables that affect opportunities, which in turn affect attitude.

Home Situations. Their home situations significantly influenced students' career decisions. The investigation found that students home situations were significant in relation to pathways and in relation to gender. More students lived with both parents than in any other arrangements. Living only with their mother was the next most common arrangement.

Such a large number of students reporting that they lived with both parents is surprising, given the high divorce rate and the often heard or read analyses of the unfortunate circumstances of the nuclear family. One can only speculate about the possibility that some were combined families or remarriages. The investigation confirmed that there are more single mothers than single fathers, the ratio being three to one.

### C. Practical Implications

The results of this study have important messages for counsellors, parents, administrators, and others involved in the counselling and influencing of students trying to make the transition from school to work and/or further education.

It is important that counsellors be informed of the relative influences of their counselling on helping students make effective choices for a successful transition from school to work and/or further education.

School counsellors probably need to rethink their respective responsibilities and roles. Their impact apparently is minimal. They must implement strategies to foster the development of highly integrated and highly differentiated career schemes for students. This would help students make an informed decision based upon information from various sources.

Furthermore, counsellors need to work as a team with teachers and parents so that they can be more influential in helping students in their educational and occupational aspirations, thus facilitating the smooth transition from school to work. Parents who tend to leave career choice decision making to counsellors at high schools should be aware of their own important direct and indirect influence on their children's decision. The study found that their impact could be very significant and that they could play a more effective role by assisting the counsellor and seeking out information on careers from the community to assist their children.

Administrators should try to bridge the gap between industry and other occupations and school by seeking active support from business and other professions, inviting such representatives to the schools and ensuring that such information is freely available to students, particularly in their last two years at high school.

Policy planners should be cognizant of where young people are in the various stages of career development so that they can intervene and provide guidance and direction to facilitate the transition process from school to work.

**D. Suggestions for Further Research**

The following recommendations are made to researchers who wish to conduct studies similar to this one:

1. Multiple time-point studies should be conducted with the students, commencing one-year after high school and repeated three and five years later to find out how many continued in their chosen career.
2 This study could be replicated using a smaller sample, open-ended questions, and interviews.
3. The instrument used in this study could be refined using fewer but more in-depth variables. This should minimize cost, in terms of both money and time.
4. Data could be compiled to supply more information on the transition processes, attitude developments, and periods of critical formation.
5. Ethnographic studies could be done to complement statistical studies and to improve our understanding of the complex processes involved.
6. A data bank could be developed to facilitate tracking of all students from junior high to adult status relative to careers.
7. This study could be carried out in rural areas of Alberta.

This information is useful because it will tend to support, qualify, or question the existing theoretical explanation of factors that influence young people in transition from school to work and/or further education. There is every need for those factors to be sharpened if they are to be of value to those who seek to apply them.

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# APPENDIX A

Permission to participate in Study

CONSENT TO PARTICIPATE IN RESEARCH MINOR STUDENT

I give my permission for my minor son/daughter to participate in the research project titled "Youth Transition from School to work: An Alberta Perspective" conducted by Nina M. Powlette, doctoral student at the University of Alberta. I understand that my son/daughter's participation will consist of participating in filling out a questionnaire. I also understand that my son/daughter's participation in this study is confidential: that the data will be reported in such a way that he/she will not be able to be identified (primarily group reports of data). Participation in this project is voluntary, and my son/daughter may decide to cease participation, or I may withdraw this permission to participate, at any time during this study.

_____

Parent/Guardian Signature Date

---

CONSENT TO PARTICIPATE IN RESEARCH

I agree to participate in the research project titled "Youth Transition from School to work: An Alberta Perspective" conducted by Nina M. Powlette, doctoral student at the University of Alberta. I understand that my participation will consist of filling out a questionnaire. I also understand that my participation in this study is confidential: that the data will be reported in such a way that I will not be able to be identified (primarily group reports of data). Participation in this project is voluntary, and I may decide to cease participation at any time during this study.

_____

Student Signature Date

# APPENDIX B

Letter to Superintendent

433 PEMBINA HALL
UNIVERSITY OF ALBERTA
EDMONTON T6G 2H8

September 3, 1993

Dear Superintendent

I am a doctoral student conducting research into the process by which young people make the transition from school to work and or further education, and I am seeking your permission to approach schools in your jurisdiction.

The study entitled "Youth transition from school to work: An Alberta Perspective" is aimed at Grade 11 students. The purpose is to get better insight into the most important career issues faced by youths and that the articulation of those problems would lead to better ways to serve students in high schools.

The study done under the auspices of the Department of Secondary Education of the University of Alberta, is unique in Alberta. Several people - Federal and Provincial Governments - have expressed an interest in the findings, and it is quite possible that their interest could translate into monetary or some other tangible form to assist students make the transition.

Completion of The questionnaire is voluntary and it takes twenty to thirty minutes to complete. The questionnaire is divided into three sections: Section A deals with background information; Section B deals with present plans and aspirations; and section C concerns attitude towards and knowledge of work. Enclosed for your perusal are: copy of the questionnaire, copy of the Ethics Committee, and copy of my Supervisory Committee.

Are you interested in the study, and if so, will you allow a CALM 20 class from three schools in your jurisdiction to participate? As soon as I receive your response I will again communicate with you. Thank you for your consideration.

Sincerely

Nina M. Powlette

Enclosure

# APPENDIX C

## Response from Superintendent

LETHBRIDGE CATHOLIC SCHOOL DISTRICT
534 - 18th STREET SOUTH, LETHBRIDGE, ALBERTA T1J 3E7
TELEPHONE (403) 329-0365
FAX (403) 328-7955



1993 09 24

Nina Powlette
433 Pembina Hall
University of Alberta
Edmonton, Alberta
T6G 2H8

I am interested in your research study as you outlined in your letter of September 3, 1993. We have one high school in our jurisdiction and I am giving you permission to approach the principal with your proposal.

I have contacted Ed Rocheleau, Principal of Catholic Central High School and he is willing to have you carry out this project in his school. Please contact him at 433 18 Street South, Lethbridge, Alberta, T1J 3E7 telephone: 327-4596 to make the necessary arrangements.

Sincerely,

Frank Letain

Frank Letain
Superintendent of Schools

FL:rh
c.c. Ed Rocheleau

Calgary Board of Education

*We open minds for life.*

DEPARTMENT OF RESEARCH AND SYSTEM DEVELOPMENT

Education Centre Building
515 Macleod Trail S.E., Calgary, Alberta, Canada T2G 2L9

8 October 1993

Nina M. Powlette
University of Calgary
433 Pembina Hall
Calgary, Alberta T6G 2H8

Dear Ms. Powlette:

Re: Youth Transition from School to Work and/or Further Education: An Alberta Experience

This letter is to advise you that permission to conduct the above referenced research project within the Calgary Board of Education has been approved by this office. The permission granted only indicates that we have no objection to the proposed study, provided that anonymity and confidentiality of the data are guaranteed. Final decision to participate in the study rests with the selected participants.

Upon completion of the project, a copy of the findings should be forwarded to the Assessment Team.

We wish you success with your study.

Yours sincerely,

Gale Miller

GALE MILLER, SUPERVISOR,
DEPARTMENT OF RESEARCH & SYSTEM DEVELOPMENT

GM/eg

pc Dr. Gary Tushingham
Chief Superintendent of Schools

433 PEMBINA HALL
UNIVERSITY OF ALBERTA
EDMONTON, ALBERTA T6G 2H8

PHONE: 432 1905

September 17, 1993

Dear Principal

I am a graduate student doing research into the problems young people encounter when they get ready to leave high school to either go on to get a job or further education and Superintendent 7- has suggested that I contact you to enquire if you would allow your Grade 11 students to participate. The study is done under the auspices of the Department of Secondary Education of the University of Alberta and is unique in Alberta.

The study entitled "Youth transition from school to work: An Alberta Perspective" is aimed at Grade 11 students. The purpose is to get better insight into the most important career issues faced by youths which would lead to better ways to serve students in high schools.

The questionnaire is voluntary and takes 20 to 30 minutes to complete and while it would best be administered to a CALM 20 class any other Grade 11 class would be appropriate.

If you are interested in the study please let me know the number of students in a class and I will forward the appropriate number of questionnaires.

In case the Superintendent's office did not forward a copy of the questionnaire for your perusal, a copy is enclosed. Also enclosed are: copy of Ethics Committee approval, copy of Supervisory Committee.

Thank you for your consideration.

Sincerely

Nina M. Powlette

Enclosures

# APPENDIX E

Response from Principal

DRUMHELLER COMPOSITE HIGH SCHOOL

450 17th Street East

Drumheller, AB TOJ OY5

Phone 823-5171
Fax 823-4058

Mr. J. Criger, Principal
Mr. T. Zariski, Vice-Principal

**September 21, 1993**

Ms. Nina Powlette
433 Pembina Hall
University of Alberta
Edmonton, AB
T6G 2H8

Dear Ms. Powlette

Thank you for your letter of September 17 regarding the study "Your transition from school to work: An Alberta Perspective".

Mrs. Sharon Cervi, one of our Calm teachers, would be happy to participate in your survey. Please send us 25 copies .

Sincerely

JE Criger
Principal

JEC/mp

# APPENDIX F

Letter to Teacher

433 Pembina Hall
University of Alberta
Edmonton, T6G 2H8

June 16, 1993

Dear (Name)

Thank you for your willingness to participate in the piloting of the enclosed survey questionnaire.

The study focuses on Grade 11 students and is looking at how young people make the transition from school to work -- which could be either immediate or through further education and then work.

I would appreciate if the students would be both honest and critical in their responses, and would

a) comment on whether or not the questions were easily understood.

b) feel free to add comments as necessary.

c) complete the questionnaire by filling in the response sheet.

and if you would note the time taken to complete the questionnaire; and return the questionnaire and answer sheets in the enclosed self-addressed envelope to me.

Should you have concerns, I can be reached at 432-1905.

Thanks!

Sincerely,

Nina Powlette

Encl.

# APPENDIX G

Questionnaire

# YOUTH TRANSITION FROM SCHOOL TO EMPLOYMENT: AN ALBERTA PERSPECTIVE

nmp/09/93 Questionnaire

# QUESTIONNAIRE

## YOUTH TRANSITION FROM SCHOOL TO WORK AND/OR FURTHER EDUCATION

**DIRECTIONS:**

On the answer sheet provided:
(1) Fill in: SEX, DATE OF BIRTH, GRADE. Write the name of your Community in place of your name.
(2) For each of the following questions, fill in the letter that corresponds with your choice.

**SECTION A: BACKGROUND INFORMATION**

1. How long have you lived in this community?
   A. Less than one year
   B. 1 - 2 years
   C. 3 - 5 years
   D. 6 - 10 years
   E. Over 10 years
   F. Not applicable

2. Have you ever lived outside Alberta?
   A. Never
   B. 0 - 6 months
   C. 7 months - 1 year
   D. 2 years or more

3. If you have ever lived outside of Alberta, how many years old were you when you came back to the Province?
   A. Less than 5 years
   B. 5 - 7
   C. 8 - 10
   D. 11 - 13
   E. 14 - 16
   F. Not applicable

4. Which of the following best describes your home situation most of the time?
   A. I live at home with my father and mother
   B. I live with relatives or friends
   C. I live alone
   D. I live at home with my mother
   E. I live at home with my father

5. How many siblings do you have?
   A. none
   B. one
   C. two
   D. three
   E. four or more

6. If you have siblings, are you
   A. the oldest
   B. between the oldest and youngest
   C. the youngest
   D. Not applicable

7. How do you spend your leisure time after school and on weekends? *(Select one).*

A. Working in the family business/part-time job
B. Watching television
C. Hanging out with friends, dating
D. Playing sports
E. Playing video games
F. Going to movies
G. Doing homework
H. Volunteering

8. Have you been out of school for any extended period of time (besides summer holidays)

A. Yes
B. No

9. What was the reason for leaving school?

A. To work full time (more than 30 hours per week)
B. To work part-time
C. Pregnancy
D. Illness
E. Dropped out
F. Not applicable

10. Which of the following ranges best describe your average mark so far this year?

A. 80 - 100
B. 65 - 79
C. 50 - 64
D. 0 - 49

11. If you worked harder at your studies how many more marks on the average do you think you would get?

A. No more
B. 5 marks more
C. 10 marks more
D. 15 marks more
E. 20 marks more

12. Which diploma program are you now taking?

A. Advanced
B. General

13. Which of the following mathematics program are you presently taking?

A. Math 20
B. Math 23
C. Math 24
D. Math 26
E. Math 30
F. Math 33

For the next five (5) Science programs identify those you are presently taking by using the following

A = Yes
B = No

14. Science 20
15. Science 24
16 Biology 20
17. Chemistry 20
18. Physics 20

19. Are you planning to finish Grade XI?
    A. Yes
    B. No
    C. Undecided

20. If you are planning to leave school before completing Grade XI, what is the reason? *(Select one)*.
    A. To get a job
    B. Failing marks
    C. To get married
    D. Financial problems
    E. Dislike of school work
    F. Family needs
    G. Not applicable

21. Do you feel that an education is
    A. Extremely important
    B. Important
    C. Nice to have but not essential
    D. Unnecessary

22. After you leave high school, where do you plan to go?
    A. University
    B. Community College
    C. Technical Institute/Apprenticeship
    D. Other

SECTION B: CAREER PLANS

23. Have you decided on a career?
    A. Yes
    B. No
    C. Not definitely

24. If yes, write the career(s) (job or profession) you wish to pursue on the space provided at the top of the answer sheet. For example, engineer, carpenter, etc.

25. For how long have you wanted to pursue this career?
    A. Less than six months
    B. Six months
    C. One Year
    D. Two years
    E. More than Three years
    F. Don't know

26. Who of the following people influenced you the most in your thinking about the kind of career you wish to enter after high school graduation.
    A. My Parents
    B. Other relatives or adults
    C. Friends
    D. A Teacher or guidance counsellor
    E. Person on the job
    F. The principal or assistant-principal
    G. Career fair representative
    H. A college or university student you know
    I. Other (i.e. media, magazine, TV, etc.)

Rate the influence the next nine (9) activities had on your plans for what you would do immediately after high school graduation (e.g. plans for further education, working, etc.)
    A. = no Influence
    B. = little influence
    C. = strong influence
    D. = very strong influence

27. Student Council
28. Interschool athletic team
29. Intramural athletic team
30. School newspaper, magazine, or yearbook
31. Subject matter clubs, such as science, mathematics, history,computers, language clubs, etc.
32. Debating, dramatics, or musical clubs
33. Band, orchestra, choir
34. School hobby clubs, such as photography, chess, etc.
35. Religious organizations
36. Volunteer organizations (i.e. Big sister, Red Cross, etc.)

37. Do you have a part-time job?
    A. Yes
    B. No

38. If you do, how many hours on average per week do you work?
    A. more than 20 hrs
    B. 15 - 19
    C. 10 - 14
    D. 5 - 9
    E. less than 5
    F. Not applicable

39. How long have you been working part-time?
    A. Less than six months
    B. 6 months - 1 year
    C. 2 years - 3 years
    D. 4 years - 5 years
    E. More than 5 years
    F. Not applicable

40. If you have ever worked part-time, summer time, or in your own business, select <u>the most important</u> reason why you did work.
    A. For the money
    B. For the experience
    C. To help the family
    D. To pay for something special that I wanted
    E. To pay for further education.
    F. Other

41. Think about your last job or the job you are now in. Did/do you enjoy the work?
    A. No
    B. Not very much
    C. Yes
    D. Very much
    E. Never worked

42. How did you get your last job?
    A. Through family business contacts
    B. I had been self-employed
    C. I knew someone who encouraged me to apply
    D. I sent in an application\resume
    E. In person/telephone
    F. I went to Canada Employment and Immigration Office.
    G. Not applicable

43. What is the highest level of income per annum you expect to earn 10 years from now.
    A. Below $10,000
    B. $10,000 to 14,999
    C. $15,000 to 29,999
    D. $30,000 to 49,999
    E. Over $50,000

44. Which of the following worries you the most?
    A. Health
    B. Academic Success
    C. Acceptance by friends
    D. Job opportunities
    E. Other worries

45. Which one of the following statements best describes what your parents/guardian thinks you should do after you finish high school?

    A. Definitely would like me to continue my education after high school
    B. Insists that I continue my education aftger high school.
    C. Does not care what I do after high school
    D. Might like me to continue my education after high school
    E. Thinks I should find a job immediately after high school.
    F. Wants me to work in the family business after high school.
    G. My personal choice with some parental advice.
    H. They have not told me what to do after high school.

SECTION C: WORK ATTITUDES AND KNOWLEDGE

If your teachers were answering the next eight (8) questions about you would they say that
    A. = Always
    B. = Often
    C. = Sometimes
    D. = Never.

46. you organize your work
47. you can be depended upon to do assignments and other work.
48. your work is done neatly
49. your appearance is neat and tidy
50. you take criticism without getting angry
51. you get your work done on time
52. you are proud of your work in school.
53. you are punctual and reliable

Evaluate the next eight (8) statements as to whether you
    A. = Strongly Agree
    B. = Agree
    C. = Disagree
    D. = Strongly Disagree

54. I would not mind being unemployed for a while

55. If I could earn $8 an hour I would take any job

56. I would do just about any kind of work if it were a steady job

57. Workers should have the right to refuse to work under conditions which they consider to be unsafe.

58. If someone has worked hard in school, they are entitled to a good job

59. Everyone has the right to collect welfare/unemployment insurance until he/she finds a job in his/her area of training

60. Everyone has the right to the kind of job for which his/her education and training has prepared him/her for.

61. Everyone has the right to refuse without risk unreasonable shift work.

Rate the following seven (7) statements as to their importance to you.

A. = Not important
B. = Somewhat important
C. = Fairly important
D. = Very important.

62. To have, a long-term job that requires me to develop my skills and capacities and that would be rewarding for me personally.

63. To be provided with occupational skills at school

64. To excel in my chosen career.

65. To do community work -- to help people in my community through organization such as hospital auxiliaries, or through informal organizations such as environmental protection groups, etc.

66. To keep a good household; to be a good cook, and have the other skills that go into being a good homemaker.

67. To have skills and the possibility of getting jobs that will give me more security and flexibility and allow me some independence in organizing my life as I wish.

68. To find enjoyment in my work.

69. To secure a high paying job with major annual income

In your opinion do you think the performance of the following jobs would be

A. = Very easy
B. = Easy
C. = Somewhat Difficult
D. = Very Difficult

70. Clerk in a Store
71. Manager of a store
72. Dentist
73. Nurse
74. Teacher
75. Truck Driver
76. Cook
77. Oil Rig Worker
78. Film Producer
79. Surgeon
80. Mechanic
81. Pilot
82. Grain Elevator Operator
83. Secretary
84. Beautician
85. Construction Worker
86. Systems Analyst
87. Janitor/Custodian
88. Salesman
89. Farmer

**NOTE: COMPLETE THIS PAGE ONLY IF YOU WISH TO BE CONTACTED IN A FOLLOW-UP STUDY.**

PRINT name, address, and the telephone number where you can most usually be reached.

YOUR NAME: _____

ADDRESS: _____

COMMUNITY: _____ PROVINCE _____ POSTAL CODE _____

TELEPHONE NUMBER: _____

PRINT the name, address and telephone number of your parents/guardian

PARENTS'/GUARDIAN'S NAME: _____

ADDRESS: _____

COMMUNITY: _____ PROVINCE _____ POSTAL CODE _____

TELEPHONE NUMBER: _____

**THANK YOU FOR YOUR COOPERATION**

**THIS INFORMATION WILL BE KEPT IN STRICT CONFIDENCE AND WILL BE USED ONLY FOR FUTURE FOLLOW-UPS IN YOUTH TRANSITION FROM SCHOOL TO WORK: AN ALBERTA PERSPECTIVE**

# APPENDIX H

Letter to Student

September 1993

Dear Grade XI student

I am a graduate student doing research in how young people make the transition from school to work and/or further education, and I am inviting you to participate in this study.

Your participation would involve completing a questionnaire which would take 20 - 30 minutes. The questionnaire is divided into three parts. Section A deals with your Background; Section B asks about your career plans; Section C concerns your attitude towards and knowledge of work.

You do not have to answer any question unless you want to. The information you give will be held in strict confidence. It will be used only by me and will be reported anonymously and on a group basis.

It is hoped that the results of this research will give insight into the most important career issues faced by youths and that this understanding will lead to better ways in which to serve persons like yourself in high schools. The study is done under the auspices of the Department of Secondary Education of the University of Alberta.

Thank you for your cooperation

Sincerely

Nina M. Powlette (Ms.)
Graduate Student

# APPENDIX I

## Chi-Square Tables

Appendix I(a)

Period Contemplating Career Choices

| Count<br>Exp Val<br>Row Pct<br>Col Pct<br>Tot Pct | Pathways 1 | 2 | 3 | 4 | Row Total |
|---|---|---|---|---|---|
| 0 | 32<br>31.0<br>45.1%<br>8.9%<br>3.9% | 17<br>16.7<br>23.9%<br>8.8%<br>2.1% | 20<br>19.7<br>28.2%<br>8.8%<br>2.4% | 2<br>3.6<br>2.8%<br>4.8%<br>.2% | 71<br>8.6% |
| 1 | 24<br>26.2<br>40.0%<br>6.7%<br>2.9% | 25<br>14.1<br>41.7%<br>12.9%<br>3.0% | 10<br>16.6<br>16.7%<br>4.4%<br>1.2% | 1<br>3.1<br>1.7%<br>2.4%<br>.1% | 60<br>7.3% |
| 2 | 70<br>61.9<br>49.3%<br>19.5%<br>8.5% | 34<br>33.5<br>23.9%<br>17.5%<br>4.1% | 32<br>39.3<br>22.5%<br>14.0%<br>3.9% | 6<br>7.2<br>4.2%<br>14.3%<br>.7% | 142<br>17.3% |
| 3 | 58<br>58.0<br>43.6%<br>16.2%<br>7.0% | 38<br>31.4<br>28.6%<br>19.6%<br>4.6% | 33<br>36.8<br>24.8%<br>14.5%<br>4.0% | 4<br>6.8<br>3.0%<br>9.5%<br>.5% | 133<br>16.2% |
| 4 | 92<br>102.5<br>39.1%<br>25.6%<br>11.2% | 51<br>55.4<br>21.7%<br>26.3%<br>6.2% | 83<br>65.1<br>35.3%<br>36.4%<br>10.1% | 9<br>12.0<br>3.8%<br>21.4%<br>1.1% | 235<br>28.6% |
| 5 | 83<br>79.4<br>45.6%<br>23.1%<br>10.1% | 29<br>42.9<br>15.9%<br>14.9%<br>3.5% | 50<br>50.4<br>27.5%<br>21.9%<br>6.1% | 20<br>9.3<br>11.0%<br>47.6%<br>2.4% | 182<br>22.1% |
| Column Total | 359<br>43.6% | 194<br>23.6% | 228<br>27.7% | 42<br>5.1% | 823<br>100.0% |

| Chi-Square | DF | Significance |
|---|---|---|
| 43.02767 | 15 | .00016 |

## Knowledge of Occupations and Pathways

Clerk in a Store

| Count / Exp Val / Row Pct / Col Pct / Tot Pct | Pathways 1 | 2 | 3 | 4 | Row Total |
|---|---|---|---|---|---|
| 0 | 146 | 102 | 88 | 21 | 357 |
| | 155.7 | 82.7 | 97.2 | 21.3 | 42.7% |
| | 40.9% | 28.6% | 24.6% | 5.9% | |
| | 40.0% | 52.6% | 38.6% | 42.0% | |
| | 17.4% | 12.2% | 10.5% | 2.5% | |
| 1 | 188 | 76 | 111 | 23 | 398 |
| | 173.6 | 92.2 | 108.4 | 23.8 | 47.6% |
| | 47.2% | 19.1% | 27.9% | 5.8% | |
| | 51.5% | 39.2% | 48.7% | 46.0% | |
| | 22.5% | 9.1% | 13.3% | 2.7% | |
| 2 | 28 | 16 | 25 | 3 | 72 |
| | 31.4 | 16.7 | 19.6 | 4.3 | 8.6% |
| | 38.9% | 22.2% | 34.7% | 4.2% | |
| | 7.7% | 8.2% | 11.0% | 6.0% | |
| | 3.3% | 1.9% | 3.0% | .4% | |
| 3 | 3 | 0 | 4 | 3 | 10 |
| | 4.4 | 2.3 | 2.7 | .6 | 1.2% |
| | 30.0% | .0% | 40.0% | 30.0% | |
| | .8% | .0% | 1.8% | 6.0% | |
| | .4% | .0% | .5% | .4% | |
| Column Total | 365 | 194 | 228 | 50 | 837 |
| | 43.6% | 23.2% | 27.2% | 6.0% | 100.0% |

| Chi-Square | DF | Significance |
|---|---|---|
| 22.92594 | 9 | .02836 |

Mechanic

| Count / Exp Val / Row Pct / Col Pct / Tot Pct | Pathways 1 | 2 | 3 | 4 | Row Total |
|---|---|---|---|---|---|
| 0 | 27 | 14 | 15 | 2 | 58 |
| | 25.3 | 13.5 | 15.8 | 3.5 | 6.9% |
| | 46.6% | 24.1% | 25.9% | 3.4% | |
| | 7.4% | 7.2% | 6.6% | 4.0% | |
| | 3.2% | 1.7% | 1.8% | .2% | |
| 1 | 90 | 41 | 44 | 12 | 187 |
| | 81.4 | 43.4 | 51.0 | 11.2 | 22.4% |
| | 48.1% | 21.9% | 23.5% | 6.4% | |
| | 24.7% | 21.1% | 19.3% | 24.0% | |
| | 10.8% | 4.9% | 5.3% | 1.4% | |
| 2 | 180 | 109 | 120 | 25 | 434 |
| | 189.0 | 100.7 | 118.4 | 26.0 | 51.9% |
| | 41.5% | 25.1% | 27.6% | 5.8% | |
| | 49.5% | 56.2% | 52.6% | 50.0% | |
| | 21.5% | 13.0% | 14.4% | 3.0% | |
| 3 | 67 | 30 | 49 | 10 | 156 |
| | 67.9 | 36.2 | 42.5 | 9.3 | 18.7% |
| | 42.9% | 19.2% | 31.4% | 6.4% | |
| | 18.4% | 15.5% | 21.5% | 20.0% | |
| | 8.0% | 3.6% | 5.9% | 1.2% | |
| Column Total | 364 | 194 | 228 | 50 | 836 |
| | 43.5% | 23.2% | 27.3% | 6.0% | 100.0% |

| Chi-Square | DF | Significance |
|---|---|---|
| 21.85048 | 9 | .03923 |

Beautician

| Count / Exp Val / Row Pct / Col Pct / Tot Pct | Pathways 1 | 2 | 3 | 4 | Row Total |
|---|---|---|---|---|---|
| 0 | 83 | 50 | 49 | 16 | 198 |
| | 86.7 | 46.1 | 53.4 | 11.9 | 23.7% |
| | 41.9% | 25.3% | 24.7% | 8.1% | |
| | 22.7% | 25.8% | 21.8% | 32.0% | |
| | 10.0% | 6.0% | 5.9% | 1.9% | |
| 1 | 186 | 87 | 108 | 20 | 401 |
| | 175.5 | 93.3 | 108.2 | 24.0 | 48.1% |
| | 46.4% | 21.7% | 26.9% | 5.0% | |
| | 51.0% | 44.8% | 48.0% | 40.0% | |
| | 22.3% | 10.4% | 12.9% | 2.4% | |
| 2 | 78 | 49 | 54 | 11 | 192 |
| | 84.0 | 44.7 | 51.8 | 11.5 | 23.0% |
| | 40.6% | 25.5% | 28.1% | 5.7% | |
| | 21.4% | 25.3% | 24.0% | 22.0% | |
| | 9.4% | 5.9% | 6.5% | 1.3% | |
| 3 | 18 | 8 | 14 | 2 | 42 |
| | 18.4 | 9.8 | 11.3 | 2.5 | 5.0% |
| | 42.9% | 19.0% | 33.3% | 4.8% | |
| | 4.9% | 4.1% | 6.2% | 4.0% | |
| | 2.2% | 1.0% | 1.7% | .2% | |
| Column Total | 365 | 194 | 225 | 49 | 833 |
| | 43.8% | 23.3% | 27.0% | 5.9% | 100.0% |

| Chi-Square | DF | Significance |
|---|---|---|
| 21.73791 | 9 | .04056 |

Computer Systems Analyst

| Count / Exp Val / Row Pct / Col Pct / Tot Pct | Pathways 1 | 2 | 3 | 4 | Row Total |
|---|---|---|---|---|---|
| 0 | 26 | 14 | 8 | 3 | 51 |
| | 22.3 | 11.8 | 13.9 | 3.0 | 6.1% |
| | 51.0% | 27.5% | 15.7% | 5.9% | |
| | 7.1% | 7.2% | 3.5% | 6.0% | |
| | 3.1% | 1.7% | 1.0% | .4% | |
| 1 | 56 | 32 | 33 | 7 | 128 |
| | 55.9 | 29.6 | 34.8 | 7.6 | 15.3% |
| | 43.8% | 25.0% | 25.8% | 5.5% | |
| | 15.3% | 16.5% | 14.5% | 14.0% | |
| | 6.7% | 3.8% | 3.9% | .8% | |
| 2 | 140 | 77 | 76 | 15 | 308 |
| | 134.5 | 71.3 | 83.8 | 18.4 | 36.8% |
| | 45.5% | 25.0% | 24.7% | 4.9% | |
| | 38.3% | 39.7% | 33.3% | 30.0% | |
| | 16.7% | 9.2% | 9.1% | 1.8% | |
| 3 | 144 | 71 | 111 | 24 | 350 |
| | 152.9 | 81.0 | 95.2 | 20.9 | 41.8% |
| | 41.1% | 20.3% | 31.7% | 6.9% | |
| | 39.3% | 36.6% | 48.7% | 48.0% | |
| | 17.2% | 8.5% | 13.2% | 2.9% | |
| Column Total | 366 | 194 | 228 | 50 | 838 |
| | 43.7% | 23.2% | 27.2% | 6.0% | 100.0% |

| Chi-Square | DF | Significance |
|---|---|---|
| 26.47504 | 9 | .00919 |

Appendix I(b)

Janitor/custodian

| Count / Exp Val / Row Pct / Col Pct / Tot Pct | Pathways 1 | 2 | 3 | 4 | Row Total |
|---|---|---|---|---|---|
| 0 | 136<br>135.7<br>43.9%<br>38.0%<br>16.6% | 75<br>71.6<br>24.2%<br>39.7%<br>9.2% | 79<br>85.6<br>25.5%<br>35.0%<br>9.7% | 20<br>17.1<br>6.5%<br>44.4%<br>2.4% | 310<br>37.9% |
| 1 | 157<br>149.2<br>46.0%<br>43.9%<br>19.2% | 69<br>78.8<br>20.2%<br>36.5%<br>8.4% | 94<br>94.2<br>27.6%<br>41.6%<br>11.5% | 21<br>18.8<br>6.2%<br>46.7%<br>2.6% | 341<br>41.7% |
| 2 | 49<br>59.5<br>36.0%<br>13.7%<br>6.0% | 41<br>31.4<br>30.1%<br>21.7%<br>5.0% | 45<br>37.6<br>33.1%<br>19.9%<br>5.5% | 1<br>7.5<br>.7%<br>2.2%<br>.1% | 136<br>16.6% |
| 3 | 16<br>13.6<br>51.6%<br>4.5%<br>2.0% | 4<br>7.2<br>12.9%<br>2.1%<br>.5% | 8<br>8.6<br>25.8%<br>3.5%<br>1.0% | 3<br>1.7<br>9.7%<br>6.7%<br>.4% | 31<br>3.8% |
| Column Total | 358<br>43.8% | 189<br>23.1% | 226<br>27.6% | 45<br>5.5% | 818<br>100.0% |

| Chi-Square | DF | Significance |
|---|---|---|
| 17.78642 | 9 | .03773 |

Appendix I(c)

Hours of part-time work per week and gender

| Count<br>Exp Val<br>Row Pct<br>Col Pct<br>Tot Pct | F | M | Row Total |
|---|---|---|---|
| 0 | 33<br>48.2<br>35.1%<br>6.4%<br>3.3% | 61<br>45.8<br>64.9%<br>12.5%<br>6.1% | 94<br>9.4% |
| 1 | 63<br>67.7<br>47.7%<br>12.2%<br>6.3% | 69<br>64.3<br>52.3%<br>14.1%<br>6.9% | 132<br>13.1% |
| 2 | 82<br>74.9<br>56.2%<br>15.9%<br>8.2% | 64<br>71.1<br>43.8%<br>13.1%<br>6.4% | 146<br>14.5% |
| 3 | 70<br>72.3<br>49.6%<br>13.6%<br>7.0% | 71<br>68.7<br>50.4%<br>14.5%<br>7.1% | 141<br>14.0% |
| 4 | 32<br>29.8<br>55.2%<br>6.2%<br>3.2% | 26<br>28.2<br>44.8%<br>5.3%<br>2.6% | 58<br>5.8% |
| 5 | 235<br>222.1<br>54.3%<br>45.6%<br>23.4% | 198<br>210.9<br>45.7%<br>40.5%<br>19.7% | 433<br>43.1% |
| Column Total | 515<br>51.3% | 489<br>48.7% | 1004<br>100.0% |

| Chi-Square | DF | Significance |
|---|---|---|
| 13.95783 | 5 | .01588 |

Length of time working Parttime and Gender

Length of time working part-time

| Count / Exp Val / Row Pct / Col Pct / Tot Pct | F | M | Row Total |
|---|---|---|---|
| 0 | 81 | 74 | 155 |
| | 79.3 | 75.7 | 15.4% |
| | 52.3% | 47.7% | |
| | 15.8% | 15.1% | |
| | 8.1% | 7.4% | |
| 1 | 89 | 75 | 164 |
| | 83.9 | 80.1 | 16.3% |
| | 54.3% | 45.7% | |
| | 17.3% | 15.3% | |
| | 8.9% | 7.5% | |
| 2 | 73 | 88 | 161 |
| | 82.3 | 78.7 | 16.0% |
| | 45.3% | 54.7% | |
| | 14.2% | 17.9% | |
| | 7.3% | 8.8% | |
| 3 | 28 | 37 | 65 |
| | 33.2 | 31.8 | 6.5% |
| | 43.1% | 56.9% | |
| | 5.4% | 7.5% | |
| | 2.8% | 3.7% | |
| 4 | 10 | 22 | 32 |
| | 16.4 | 15.6 | 3.2% |
| | 31.3% | 68.8% | |
| | 1.9% | 4.5% | |
| | 1.0% | 2.2% | |
| 5 | 233 | 195 | 428 |
| | 218.9 | 209.1 | 42.6% |
| | 54.4% | 45.6% | |
| | 45.3% | 39.7% | |
| | 23.2% | 19.4% | |
| Column Total | 514 | 491 | 1005 |
| | 51.1% | 48.9% | 100.0% |

| Chi-Square | DF | Significance |
|---|---|---|
| 11.50841 | 5 | .04218 |

Reasons for working part-time and gender

Appendix I(e)

| Count<br>Exp Val<br>Row Pct<br>Col Pct<br>Tot Pct | F | M | Row Total |
|---|---|---|---|
| 0 | 279<br>291.5<br>48.8%<br>55.1%<br>28.1% | 293<br>280.5<br>51.2%<br>60.2%<br>29.5% | 572<br>57.6% |
| 1 | 95<br>83.1<br>58.3%<br>18.8%<br>9.6% | 68<br>79.9<br>41.7%<br>14.0%<br>6.8% | 163<br>16.4% |
| 2 | 23<br>27.5<br>42.6%<br>4.5%<br>2.3% | 31<br>26.5<br>57.4%<br>6.4%<br>3.1% | 54<br>5.4% |
| 3 | 35<br>41.3<br>43.2%<br>6.9%<br>3.5% | 46<br>39.7<br>56.8%<br>9.4%<br>4.6% | 81<br>8.2% |
| 4 | 20<br>17.3<br>58.8%<br>4.0%<br>2.0% | 14<br>16.7<br>41.2%<br>2.9%<br>1.4% | 34<br>3.4% |
| 5 | 54<br>45.4<br>60.7%<br>10.7%<br>5.4% | 35<br>43.6<br>39.3%<br>7.2%<br>3.5% | 89<br>9.0% |
| Column Total | 506<br>51.0% | 487<br>49.0% | 993<br>100.0% |

| Chi-Square | DF | Significance |
|---|---|---|
| 12.25001 | 5 | .03152 |

| Count / Exp Val / Row Pct / Col Pct / Tot Pct | Pathways 1 | 2 | 3 | 4 | Row Total |
|---|---|---|---|---|---|
| 0 | 72 | 42 | 43 | 8 | 165 |
| | 71.9 | 37.8 | 45.4 | 10.0 | 19.9% |
| | 43.6% | 25.5% | 26.1% | 4.8% | |
| | 19.9% | 22.1% | 18.9% | 16.0% | |
| | 8.7% | 5.1% | 5.2% | 1.0% | |
| 1 | 34 | 14 | 19 | 1 | 68 |
| | 29.6 | 15.6 | 18.7 | 4.1 | 8.2% |
| | 50.0% | 20.6% | 27.9% | 1.5% | |
| | 9.4% | 7.4% | 8.3% | 2.0% | |
| | 4.1% | 1.7% | 2.3% | .1% | |
| 2 | 126 | 86 | 80 | 22 | 314 |
| | 136.7 | 72.0 | 86.4 | 18.9 | 37.9% |
| | 40.1% | 27.4% | 25.5% | 7.0% | |
| | 34.9% | 45.3% | 35.1% | 44.0% | |
| | 15.2% | 10.4% | 9.7% | 2.7% | |
| 3 | 48 | 13 | 45 | 9 | 115 |
| | 50.1 | 26.4 | 31.6 | 6.9 | 13.9% |
| | 41.7% | 11.3% | 39.1% | 7.8% | |
| | 13.3% | 6.8% | 19.7% | 18.0% | |
| | 5.8% | 1.6% | 5.4% | 1.1% | |
| 4 | 36 | 7 | 25 | 6 | 74 |
| | 32.2 | 17.0 | 20.4 | 4.5 | 8.9% |
| | 48.6% | 9.5% | 33.8% | 8.1% | |
| | 10.0% | 3.7% | 11.0% | 12.0% | |
| | 4.3% | .8% | 3.0% | .7% | |
| 5 | 2 | 2 | 4 | 0 | 8 |
| | 3.5 | 1.8 | 2.2 | .5 | 1.0% |
| | 25.0% | 25.0% | 50.0% | .0% | |
| | .6% | 1.1% | 1.8% | .0% | |
| | .2% | .2% | .5% | .0% | |
| Column Total | 361 | 190 | 228 | 50 | 829 |
| | 43.5% | 22.9% | 27.5% | 6.0% | 100.0% |

(Continued)

| Count / Exp Val / Row Pct / Col Pct / Tot Pct | Pathways 1 | 2 | 3 | 4 | Row Total |
|---|---|---|---|---|---|
| 6 | 39 | 22 | 11 | 4 | 76 |
| | 33.1 | 17.4 | 20.9 | 4.6 | 9.2% |
| | 51.3% | 28.9% | 14.5% | 5.3% | |
| | 10.8% | 11.6% | 4.8% | 8.0% | |
| | 4.7% | 2.7% | 1.3% | .5% | |
| 7 | 4 | 4 | 1 | 0 | 9 |
| | 3.9 | 2.1 | 2.5 | .5 | 1.1% |
| | 44.4% | 44.4% | 11.1% | .0% | |
| | 1.1% | 2.1% | .4% | .0% | |
| | .5% | .5% | .1% | .0% | |
| Column Total | 361 | 190 | 228 | 50 | 829 |
| | 43.5% | 22.9% | 27.5% | 6.0% | 100.0% |

| Chi-Square | DF | Significance |
|---|---|---|
| 42.54857 | 21 | .00359 |

Appendix I(f)

Leisure activities and Gender

| Count / Exp Val / Row Pct / Col Pct / Tot Pct | F | M | Row Total |
|---|---|---|---|
| 0 | 94<br>96.8<br>49.2%<br>18.4%<br>9.3% | 97<br>94.2<br>50.8%<br>19.5%<br>9.6% | 191<br>18.9% |
| 1 | 41<br>42.1<br>49.4%<br>8.0%<br>4.1% | 42<br>40.9<br>50.6%<br>8.5%<br>4.2% | 83<br>8.2% |
| 2 | 233<br>201.3<br>58.7%<br>45.6%<br>23.1% | 164<br>195.7<br>41.3%<br>33.0%<br>16.3% | 397<br>39.4% |
| 3 | 44<br>75.0<br>29.7%<br>8.6%<br>4.4% | 104<br>73.0<br>70.3%<br>20.9%<br>10.3% | 148<br>14.7% |
| 4 | 34<br>43.1<br>40.0%<br>6.7%<br>3.4% | 51<br>41.9<br>60.0%<br>10.3%<br>5.1% | 85<br>8.4% |
| 5 | 2<br>4.1<br>25.0%<br>.4%<br>.2% | 6<br>3.9<br>75.0%<br>1.2%<br>.6% | 8<br>.8% |
| 6 | 56<br>41.6<br>68.3%<br>11.0%<br>5.6% | 26<br>40.4<br>31.7%<br>5.2%<br>2.6% | 82<br>8.1% |
| 7 | 7<br>7.1<br>50.0%<br>1.4%<br>.7% | 7<br>6.9<br>50.0%<br>1.4%<br>.7% | 14<br>1.4% |
| Column Total | 511<br>50.7% | 497<br>49.3% | 1008<br>100.0% |

(Continued)

| Chi-Square | DF | Significance |
|---|---|---|
| 52.56724 | 7 | .00000 |

## Work Habits and Pathways

Organized

| Count / Exp Val / Row Pct / Col Pct / Tot Pct | Pathways 1 | 2 | 3 | 4 | Row Total |
|---|---|---|---|---|---|
| 0 | 129 | 72 | 51 | 14 | 266 |
| | 115.9 | 61.6 | 72.7 | 15.9 | 31.7% |
| | 48.5% | 27.1% | 19.2% | 5.3% | |
| | 35.3% | 37.1% | 22.3% | 28.0% | |
| | 15.4% | 8.6% | 6.1% | 1.7% | |
| 1 | 139 | 86 | 95 | 23 | 343 |
| | 149.4 | 79.4 | 93.7 | 20.5 | 40.9% |
| | 40.5% | 25.1% | 27.7% | 6.7% | |
| | 38.1% | 44.3% | 41.5% | 46.0% | |
| | 16.6% | 10.3% | 11.3% | 2.7% | |
| 2 | 83 | 30 | 80 | 10 | 203 |
| | 88.4 | 47.0 | 55.5 | 12.1 | 24.2% |
| | 40.9% | 14.8% | 39.4% | 4.9% | |
| | 22.7% | 15.5% | 34.9% | 20.0% | |
| | 9.9% | 3.6% | 9.5% | 1.2% | |
| 3 | 14 | 6 | 3 | 3 | 26 |
| | 11.3 | 6.0 | 7.1 | 1.6 | 3.1% |
| | 53.8% | 23.1% | 11.5% | 11.5% | |
| | 3.8% | 3.1% | 1.3% | 6.0% | |
| | 1.7% | .7% | .4% | .4% | |
| Column Total | 365 43.6% | 194 23.2% | 229 27.3% | 50 6.0% | 838 100.0% |

| Chi-Square | DF | Significance |
|---|---|---|
| 33.59536 | 9 | .00011 |

Can be depended on

| Count / Exp Val / Row Pct / Col Pct / Tot Pct | Pathways 1 | 2 | 3 | 4 | Row Total |
|---|---|---|---|---|---|
| 0 | 140 | 75 | 72 | 12 | 299 |
| | 130.2 | 69.2 | 81.7 | 17.8 | 35.7% |
| | 46.8% | 25.1% | 24.1% | 4.0% | |
| | 38.4% | 38.7% | 31.4% | 24.0% | |
| | 16.7% | 8.9% | 8.6% | 1.4% | |
| 1 | 150 | 85 | 83 | 20 | 338 |
| | 147.2 | 78.2 | 92.4 | 20.2 | 40.3% |
| | 44.4% | 25.1% | 24.6% | 5.9% | |
| | 41.1% | 43.8% | 36.2% | 40.0% | |
| | 17.9% | 10.1% | 9.9% | 2.4% | |
| 2 | 67 | 32 | 67 | 17 | 183 |
| | 79.7 | 42.4 | 50.0 | 10.9 | 21.8% |
| | 36.6% | 17.5% | 36.6% | 9.3% | |
| | 18.4% | 16.5% | 29.3% | 34.0% | |
| | 8.0% | 3.8% | 8.0% | 2.0% | |
| 3 | 8 | 2 | 7 | 1 | 18 |
| | 7.8 | 4.2 | 4.9 | 1.1 | 2.1% |
| | 44.4% | 11.1% | 38.9% | 5.6% | |
| | 2.2% | 1.0% | 3.1% | 2.0% | |
| | 1.0% | .2% | .8% | .1% | |
| Column Total | 365 43.6% | 194 23.2% | 229 27.3% | 50 6.0% | 838 100.0% |

| Chi-Square | DF | Significance |
|---|---|---|
| 21.60442 | 9 | .01022 |

| Count / Exp Val / Row Pct / Col Pct / Tot Pct | Pathways 1 | 2 | 3 | 4 | Row Total |
|---|---|---|---|---|---|
| Tidy 0 | 229 | 112 | 131 | 35 | 507 |
| | 220.8 | 117.4 | 138.5 | 30.3 | 60.5% |
| | 45.2% | 22.1% | 25.8% | 6.9% | |
| | 62.7% | 57.7% | 57.2% | 70.0% | |
| | 27.3% | 13.4% | 15.6% | 4.2% | |
| 1 | 98 | 67 | 68 | 11 | 244 |
| | 106.3 | 56.5 | 66.7 | 14.6 | 29.1% |
| | 40.2% | 27.5% | 27.9% | 4.5% | |
| | 26.8% | 34.5% | 29.7% | 22.0% | |
| | 11.7% | 8.0% | 8.1% | 1.3% | |
| 2 | 33 | 14 | 27 | 2 | 76 |
| | 33.1 | 17.6 | 20.8 | 4.5 | 9.1% |
| | 43.4% | 18.4% | 35.5% | 2.6% | |
| | 9.0% | 7.2% | 11.8% | 4.0% | |
| | 3.9% | 1.7% | 3.2% | .2% | |
| 3 | 5 | 1 | 3 | 1 | 10 |
| | 4.4 | 2.3 | 2.7 | .6 | 1.2% |
| | 50.0% | 10.0% | 30.0% | 10.0% | |
| | 1.4% | .5% | 1.3% | 2.0% | |
| | .6% | .1% | .4% | .1% | |
| Column Total | 365 | 194 | 229 | 49 | 837 |
| | 43.6% | 23.2% | 27.4% | 5.9% | 100.0% |

| Chi-Square | DF | Significance |
|---|---|---|
| 23.78422 | 9 | .02176 |

## Work Habits and Pathways

| Proud of Work | Pathways 1 | 2 | 3 | 4 | Row Total |
|---|---|---|---|---|---|
| 0 | 91 | 55 | 49 | 10 | 205 |
| | 89.3 | 47.5 | 56.0 | 12.2 | 24.5% |
| | 44.4% | 26.8% | 23.9% | 4.9% | |
| | 24.9% | 28.4% | 21.4% | 20.0% | |
| | 10.9% | 6.6% | 5.8% | 1.2% | |
| 1 | 159 | 96 | 87 | 12 | 354 |
| | 154.2 | 82.0 | 96.7 | 21.1 | 42.2% |
| | 44.9% | 27.1% | 24.6% | 3.4% | |
| | 43.6% | 49.5% | 38.0% | 24.0% | |
| | 19.0% | 11.5% | 10.4% | 1.4% | |
| 2 | 108 | 39 | 79 | 23 | 249 |
| | 108.5 | 57.6 | 68.0 | 14.9 | 29.7% |
| | 43.4% | 15.7% | 31.7% | 9.2% | |
| | 29.6% | 20.1% | 34.5% | 46.0% | |
| | 12.9% | 4.7% | 9.4% | 2.7% | |
| 3 | 7 | 4 | 14 | 5 | 30 |
| | 13.1 | 6.9 | 8.2 | 1.8 | 3.6% |
| | 23.3% | 13.3% | 46.7% | 16.7% | |
| | 1.9% | 2.1% | 6.1% | 10.0% | |
| | .8% | .5% | 1.7% | .6% | |
| Column Total | 365 43.6% | 194 23.2% | 229 27.3% | 50 6.0% | 838 100.0% |

| Chi-Square | DF | Significance |
|---|---|---|
| 36.18375 | 9 | .00004 |

| Timely | Pathways 1 | 2 | 3 | 4 | Row Total |
|---|---|---|---|---|---|
| 0 | 123 | 69 | 63 | 11 | 266 |
| | 115.9 | 61.6 | 72.7 | 15.9 | 31.7% |
| | 46.2% | 25.9% | 23.7% | 4.1% | |
| | 33.7% | 35.6% | 27.5% | 22.0% | |
| | 14.7% | 8.2% | 7.5% | 1.3% | |
| 1 | 161 | 87 | 109 | 25 | 382 |
| | 166.4 | 88.4 | 104.4 | 22.8 | 45.6% |
| | 42.1% | 22.8% | 28.5% | 6.5% | |
| | 44.1% | 44.8% | 47.6% | 50.0% | |
| | 19.2% | 10.4% | 13.0% | 3.0% | |
| 2 | 76 | 37 | 55 | 13 | 181 |
| | 78.8 | 41.9 | 49.5 | 10.8 | 21.6% |
| | 42.0% | 20.4% | 30.4% | 7.2% | |
| | 20.8% | 19.1% | 24.0% | 26.0% | |
| | 9.1% | 4.4% | 6.6% | 1.6% | |
| 3 | 5 | 1 | 2 | 0 | 8 |
| | 3.5 | 1.9 | 2.2 | .5 | 1.0% |
| | 62.5% | 12.5% | 25.0% | .0% | |
| | 1.4% | .5% | .9% | .0% | |
| | .6% | .1% | .2% | .0% | |
| Column Total | 365 43.6% | 194 23.2% | 229 27.3% | 50 6.0% | 838 100.0% |

| Chi-Square | DF | Significance |
|---|---|---|
| 26.12449 | 9 | .01031 |

Community Work

| Count / Exp Val / Row Pct / Col Pct / Tot Pct | Pathways 1 | 2 | 3 | 4 | Row Total |
|---|---|---|---|---|---|
| 0 | 52 | 15 | 35 | 11 | 113 |
| | 49.3 | 26.1 | 30.8 | 6.7 | 13.5% |
| | 46.0% | 13.3% | 31.0% | 9.7% | |
| | 14.2% | 7.7% | 15.3% | 22.0% | |
| | 6.2% | 1.8% | 4.2% | 1.3% | |
| 1 | 151 | 69 | 95 | 20 | 335 |
| | 146.1 | 77.5 | 91.4 | 20.0 | 39.9% |
| | 45.1% | 20.6% | 28.4% | 6.0% | |
| | 41.3% | 35.6% | 41.5% | 40.0% | |
| | 18.0% | 8.2% | 11.3% | 2.4% | |
| 2 | 124 | 68 | 70 | 19 | 281 |
| | 122.6 | 65.0 | 76.7 | 16.7 | 33.5% |
| | 44.1% | 24.2% | 24.9% | 6.8% | |
| | 33.9% | 35.1% | 30.6% | 38.0% | |
| | 14.8% | 8.1% | 8.3% | 2.3% | |
| 3 | 39 | 42 | 29 | 0 | 110 |
| | 48.0 | 25.4 | 30.0 | 6.6 | 13.1% |
| | 35.5% | 38.2% | 26.4% | .0% | |
| | 10.7% | 21.6% | 12.7% | .0% | |
| | 4.6% | 5.0% | 3.5% | .0% | |
| Column Total | 366 43.6% | 194 23.1% | 229 27.3% | 50 6.0% | 839 100.0% |

| Chi-Square | DF | Significance |
|---|---|---|
| 29.48250 | 9 | .00054 |

Keep a good household

| Count / Exp Val / Row Pct / Col Pct / Tot Pct | Pathways 1 | 2 | 3 | 4 | Row Total |
|---|---|---|---|---|---|
| 0 | 46 | 19 | 36 | 7 | 108 |
| | 47.2 | 24.9 | 29.5 | 6.5 | 12.9% |
| | 42.6% | 17.6% | 33.3% | 6.5% | |
| | 12.6% | 9.8% | 15.8% | 14.0% | |
| | 5.5% | 2.3% | 4.3% | .8% | |
| 1 | 131 | 78 | 59 | 17 | 285 |
| | 124.4 | 65.8 | 77.7 | 17.0 | 34.1% |
| | 46.0% | 27.4% | 20.7% | 6.0% | |
| | 35.9% | 40.4% | 25.9% | 34.0% | |
| | 15.7% | 9.3% | 7.1% | 2.0% | |
| 2 | 124 | 56 | 80 | 13 | 273 |
| | 119.2 | 63.0 | 74.5 | 16.3 | 32.7% |
| | 45.4% | 20.5% | 29.3% | 4.8% | |
| | 34.0% | 29.0% | 35.1% | 26.0% | |
| | 14.8% | 6.7% | 9.6% | 1.6% | |
| 3 | 64 | 40 | 53 | 13 | 170 |
| | 74.2 | 39.2 | 46.4 | 10.2 | 20.3% |
| | 37.6% | 23.5% | 31.2% | 7.6% | |
| | 17.5% | 20.7% | 23.2% | 26.0% | |
| | 7.7% | 4.8% | 6.3% | 1.6% | |
| Column Total | 365 43.7% | 193 23.1% | 228 27.3% | 50 6.0% | 836 100.0% |

| Chi-Square | DF | Significance |
|---|---|---|
| 15.29218 | 9 | .08322 |

## Future Lifestyle and Gender

Community Work by Gender

| Count / Exp Val / Row Pct / Col Pct / Tot Pct | F | M | Row Total |
|---|---|---|---|
| 0 | 53 | 91 | 144 |
| | 73.4 | 70.6 | 14.2% |
| | 36.8% | 63.2% | |
| | 10.3% | 18.3% | |
| | 5.2% | 9.0% | |
| 1 | 196 | 207 | 403 |
| | 205.5 | 197.5 | 39.7% |
| | 48.6% | 51.4% | |
| | 37.9% | 41.6% | |
| | 19.3% | 20.4% | |
| 2 | 177 | 162 | 339 |
| | 172.8 | 166.2 | 33.4% |
| | 52.2% | 47.8% | |
| | 34.2% | 32.6% | |
| | 17.5% | 16.0% | |
| 3 | 91 | 37 | 128 |
| | 65.3 | 62.7 | 12.6% |
| | 71.1% | 28.9% | |
| | 17.6% | 7.4% | |
| | 9.0% | 3.6% | |
| Column Total | 517 | 497 | 1014 |
| | 51.0% | 49.0% | 100.0% |

| Chi-Square | DF | Significance |
|---|---|---|
| 33.39151 | 3 | .00000 |

Enjoyment in work by Gender

| Count / Exp Val / Row Pct / Col Pct / Tot Pct | F | M | Row Total |
|---|---|---|---|
| 0 | 28 | 34 | 62 |
| | 31.5 | 30.5 | 6.1% |
| | 45.2% | 54.8% | |
| | 5.4% | 6.8% | |
| | 2.8% | 3.3% | |
| 1 | 72 | 62 | 134 |
| | 68.0 | 66.0 | 13.2% |
| | 53.7% | 46.3% | |
| | 14.0% | 12.4% | |
| | 7.1% | 6.1% | |
| 2 | 92 | 121 | 213 |
| | 108.1 | 104.9 | 21.0% |
| | 43.2% | 56.8% | |
| | 17.9% | 24.2% | |
| | 9.1% | 11.9% | |
| 3 | 323 | 283 | 606 |
| | 307.5 | 298.5 | 59.7% |
| | 53.3% | 46.7% | |
| | 62.7% | 56.6% | |
| | 31.8% | 27.9% | |
| Column Total | 515 | 500 | 1015 |
| | 50.7% | 49.3% | 100.0% |

| Chi-Square | DF | Significance |
|---|---|---|
| 7.69554 | 3 | .05274 |

## Future Lifestyle and Gender

Keep a good household

| Count / Exp Val / Row Pct / Col Pct / Tot Pct | F | M | Row Total |
|---|---|---|---|
| 0 | 59<br>64.9<br>46.5%<br>11.4%<br>5.8% | 68<br>62.1<br>53.5%<br>13.7%<br>6.7% | 127<br>12.5% |
| 1 | 198<br>182.9<br>55.3%<br>38.2%<br>19.5% | 160<br>175.1<br>44.7%<br>32.2%<br>15.7% | 358<br>35.2% |
| 2 | 144<br>164.0<br>44.9%<br>27.7%<br>14.2% | 177<br>157.0<br>55.1%<br>35.6%<br>17.4% | 321<br>31.6% |
| 3 | 118<br>107.3<br>56.2%<br>22.7%<br>11.6% | 92<br>102.7<br>43.8%<br>18.5%<br>9.1% | 210<br>20.7% |
| Column Total | 519<br>51.1% | 497<br>48.9% | 1016<br>100.0% |

| Chi-Square | DF | Significance |
|---|---|---|
| 10.81158 | 3 | .01279 |

Secure high paying job

| Count / Exp Val / Row Pct / Col Pct / Tot Pct | F | M | Row Total |
|---|---|---|---|
| 0 | 40<br>40.2<br>50.6%<br>7.7%<br>3.9% | 39<br>38.8<br>49.4%<br>7.8%<br>3.8% | 79<br>7.8% |
| 1 | 130<br>112.9<br>58.6%<br>25.1%<br>12.8% | 92<br>109.1<br>41.4%<br>18.4%<br>9.0% | 222<br>21.8% |
| 2 | 172<br>166.2<br>52.6%<br>33.3%<br>16.9% | 155<br>160.8<br>47.4%<br>31.0%<br>15.2% | 327<br>32.2% |
| 3 | 175<br>197.8<br>45.0%<br>33.8%<br>17.2% | 214<br>191.2<br>55.0%<br>42.8%<br>21.0% | 389<br>38.2% |
| Column Total | 517<br>50.8% | 500<br>49.2% | 1017<br>100.0% |

| Chi-Square | DF | Significance |
|---|---|---|
| 11.02989 | 3 | .01157 |

Program and Pathways

| Count / Exp Val / Row Pct / Col Pct / Tot Pct | 1 | 2 | 3 | 4 | Row Total |
|---|---|---|---|---|---|
| 0 | 262 | 137 | 106 | 30 | 535 |
| | 233.9 | 123.4 | 145.4 | 32.3 | 64.6% |
| | 49.0% | 25.6% | 19.8% | 5.6% | |
| | 72.4% | 71.7% | 47.1% | 60.0% | |
| | 31.6% | 16.5% | 12.8% | 3.6% | |
| 1 | 100 | 54 | 119 | 20 | 293 |
| | 128.1 | 67.6 | 79.6 | 17.7 | 35.4% |
| | 34.1% | 18.4% | 40.6% | 6.8% | |
| | 27.6% | 28.3% | 52.9% | 40.0% | |
| | 12.1% | 6.5% | 14.4% | 2.4% | |
| Column Total | 362 | 191 | 225 | 50 | 828 |
| | 43.7% | 23.1% | 27.2% | 6.0% | 100.0% |

| Chi-Square | DF | Significance |
|---|---|---|
| 44.37778 | 3 | .00000 |

Program and Gender

| Count / Exp Val / Row Pct / Col Pct / Tot Pct | F | M | Row Total |
|---|---|---|---|
| 0 | 340 | 288 | 628 |
| | 321.8 | 306.2 | 62.2% |
| | 54.1% | 45.9% | |
| | 65.8% | 58.5% | |
| | 33.7% | 28.5% | |
| 1 | 177 | 204 | 381 |
| | 195.2 | 185.8 | 37.8% |
| | 46.5% | 53.5% | |
| | 34.2% | 41.5% | |
| | 17.5% | 20.2% | |
| Column Total | 517 | 492 | 1009 |
| | 51.2% | 48.8% | 100.0% |

| Chi-Square | DF | Significance |
|---|---|---|
| 5.60313 | 1 | .01793 |

Appendix I(j)

## Grades and Pathways

| Grades | Pathways 1 | 2 | 3 | 4 | Row Total |
|---|---|---|---|---|---|
| 0 | 132 | 78 | 81 | 22 | 313 |
| | 136.7 | 72.6 | 85.4 | 18.3 | 37.4% |
| | 42.2% | 24.9% | 25.9% | 7.0% | |
| | 36.2% | 40.2% | 35.5% | 44.9% | |
| | 15.8% | 9.3% | 9.7% | 2.6% | |
| 1 | 157 | 68 | 96 | 22 | 343 |
| | 149.8 | 79.6 | 93.5 | 20.1 | 41.0% |
| | 45.8% | 19.8% | 28.0% | 6.4% | |
| | 43.0% | 35.1% | 42.1% | 44.9% | |
| | 18.8% | 8.1% | 11.5% | 2.6% | |
| 2 | 61 | 42 | 42 | 2 | 147 |
| | 64.2 | 34.1 | 40.1 | 8.6 | 17.6% |
| | 41.5% | 28.6% | 28.6% | 1.4% | |
| | 16.7% | 21.6% | 18.4% | 4.1% | |
| | 7.3% | 5.0% | 5.0% | .2% | |
| 3 | 15 | 6 | 9 | 2 | 32 |
| | 14.0 | 7.4 | 8.7 | 1.9 | 3.8% |
| | 46.9% | 18.8% | 28.1% | 6.3% | |
| | 4.1% | 3.1% | 3.9% | 4.1% | |
| | 1.8% | .7% | 1.1% | .2% | |
| Column Total | 365 43.7% | 194 23.2% | 228 27.3% | 48 5.9% | 835 100.0% |

| Chi-Square | DF | Significance |
|---|---|---|
| 26.01514 | 9 | .01068 |

## Extracurricular activities and Pathways

Student Council

| Count / Exp Val / Row Pct / Col Pct / Tot Pct | Pathways 1 | 2 | 3 | 4 | Row Total |
|---|---|---|---|---|---|
| 0 | 260 | 112 | 155 | 41 | 568 |
| | 247.7 | 131.0 | 155.4 | 33.9 | 67.9% |
| | 45.8% | 19.7% | 27.3% | 7.2% | |
| | 71.2% | 58.0% | 67.7% | 82.0% | |
| | 31.1% | 13.4% | 18.5% | 4.9% | |
| 1 | 83 | 66 | 66 | 8 | 223 |
| | 97.2 | 51.4 | 61.0 | 13.3 | 26.6% |
| | 37.2% | 29.6% | 29.6% | 3.6% | |
| | 22.7% | 34.2% | 28.8% | 16.0% | |
| | 9.9% | 7.9% | 7.9% | 1.0% | |
| 2 | 18 | 13 | 6 | 1 | 38 |
| | 16.6 | 8.8 | 10.4 | 2.3 | 4.5% |
| | 47.4% | 34.2% | 15.8% | 2.6% | |
| | 4.9% | 6.7% | 2.6% | 2.0% | |
| | 2.2% | 1.6% | .7% | .1% | |
| 3 | 4 | 2 | 2 | 0 | 8 |
| | 3.5 | 1.8 | 2.2 | .5 | 1.0% |
| | 50.0% | 25.0% | 25.0% | .0% | |
| | 1.1% | 1.0% | .9% | .0% | |
| | .5% | .2% | .2% | .0% | |
| Column Total | 365 43.6% | 193 23.1% | 229 27.4% | 50 6.0% | 837 100.0% |

| Chi-Square | DF | Significance |
|---|---|---|
| 18.91266 | 9 | .02595 |

School newspaper magazine

| Count / Exp Val / Row Pct / Col Pct / Tot Pct | Pathways 1 | 2 | 3 | 4 | Row Total |
|---|---|---|---|---|---|
| 0 | 250 | 112 | 165 | 35 | 562 |
| | 245.4 | 130.4 | 152.6 | 33.6 | 67.2% |
| | 44.5% | 19.9% | 29.4% | 6.2% | |
| | 68.5% | 57.7% | 72.7% | 70.0% | |
| | 29.9% | 13.4% | 19.7% | 4.2% | |
| 1 | 85 | 54 | 52 | 11 | 202 |
| | 88.2 | 46.9 | 54.8 | 12.1 | 24.2% |
| | 42.1% | 26.7% | 25.7% | 5.4% | |
| | 23.3% | 27.8% | 22.9% | 22.0% | |
| | 10.2% | 6.5% | 6.2% | 1.3% | |
| 2 | 25 | 20 | 8 | 2 | 55 |
| | 24.0 | 12.8 | 14.9 | 3.3 | 6.6% |
| | 45.5% | 36.4% | 14.5% | 3.6% | |
| | 6.8% | 10.3% | 3.5% | 4.0% | |
| | 3.0% | 2.4% | 1.0% | .2% | |
| 3 | 5 | 8 | 2 | 2 | 17 |
| | 7.4 | 3.9 | 4.6 | 1.0 | 2.0% |
| | 29.4% | 47.1% | 11.8% | 11.8% | |
| | 1.4% | 4.1% | .9% | 4.0% | |
| | .6% | 1.0% | .2% | .2% | |
| Column Total | 365 43.7% | 194 23.2% | 227 27.2% | 50 6.0% | 836 100.0% |

| Chi-Square | DF | Significance |
|---|---|---|
| 20.45713 | 9 | .01529 |

Subject matter clubs by Pathways

| Count / Exp Val / Row Pct / Col Pct / Tot Pct | 1 | 2 | 3 | 4 | Row Total |
|---|---|---|---|---|---|
| 0 | 163 | 90 | 126 | 34 | 413 |
| | 179.9 | 95.6 | 112.9 | 24.6 | 49.3% |
| | 39.5% | 21.8% | 30.5% | 8.2% | |
| | 44.7% | 46.4% | 55.0% | 68.0% | |
| | 19.5% | 10.7% | 15.0% | 4.1% | |
| 1 | 92 | 50 | 65 | 8 | 215 |
| | 93.6 | 49.8 | 58.8 | 12.8 | 25.7% |
| | 42.8% | 23.3% | 30.2% | 3.7% | |
| | 25.2% | 25.8% | 28.4% | 16.0% | |
| | 11.0% | 6.0% | 7.8% | 1.0% | |
| 2 | 71 | 35 | 29 | 5 | 140 |
| | 61.0 | 32.4 | 38.3 | 8.4 | 16.7% |
| | 50.7% | 25.0% | 20.7% | 3.6% | |
| | 19.5% | 18.0% | 12.7% | 10.0% | |
| | 8.5% | 4.2% | 3.5% | .6% | |
| 3 | 39 | 19 | 9 | 3 | 70 |
| | 30.5 | 16.2 | 19.1 | 4.2 | 8.4% |
| | 55.7% | 27.1% | 12.9% | 4.3% | |
| | 10.7% | 9.8% | 3.9% | 6.0% | |
| | 4.7% | 2.3% | 1.1% | .4% | |
| Column Total | 365 43.6% | 194 23.2% | 229 27.3% | 50 6.0% | 838 100.0% |

| Chi-Square | DF | Significance |
|---|---|---|
| 23.50201 | 9 | .00516 |

Debating dramatics by Pathways

| Count / Exp Val / Row Pct / Col Pct / Tot Pct | 1 | 2 | 3 | 4 | Row Total |
|---|---|---|---|---|---|
| 0 | 220 | 96 | 137 | 35 | 488 |
| | 212.9 | 112.8 | 133.2 | 29.1 | 58.2% |
| | 45.1% | 19.7% | 28.1% | 7.2% | |
| | 60.1% | 49.5% | 59.8% | 70.0% | |
| | 26.2% | 11.4% | 16.3% | 4.2% | |
| 1 | 97 | 52 | 62 | 10 | 221 |
| | 96.4 | 51.1 | 60.3 | 13.2 | 26.3% |
| | 43.9% | 23.5% | 28.1% | 4.5% | |
| | 26.5% | 26.8% | 27.1% | 20.0% | |
| | 11.6% | 6.2% | 7.4% | 1.2% | |
| 2 | 39 | 30 | 18 | 4 | 91 |
| | 39.7 | 21.0 | 24.8 | 5.4 | 10.8% |
| | 42.9% | 33.0% | 19.8% | 4.4% | |
| | 10.7% | 15.5% | 7.9% | 8.0% | |
| | 4.6% | 3.6% | 2.1% | .5% | |
| 3 | 10 | 16 | 12 | 1 | 39 |
| | 17.0 | 9.0 | 10.6 | 2.3 | 4.6% |
| | 25.6% | 41.0% | 30.8% | 2.6% | |
| | 2.7% | 8.2% | 5.2% | 2.0% | |
| | 1.2% | 1.9% | 1.4% | .1% | |
| Column Total | 366 43.6% | 194 23.1% | 229 27.3% | 50 6.0% | 839 100.0% |

| Chi-Square | DF | Significance |
|---|---|---|
| 20.19900 | 9 | .01672 |

## Extracurricular activities and Gender

Interschool athletic team

| Count / Exp Val / Row Pct / Col Pct / Tot Pct | F | M | Row Total |
|---|---|---|---|
| 0 | 306<br>280.4<br>55.6%<br>58.8%<br>30.0% | 244<br>269.6<br>44.4%<br>48.8%<br>23.9% | 550<br>53.9% |
| 1 | 147<br>140.7<br>53.3%<br>28.3%<br>14.4% | 129<br>135.3<br>46.7%<br>25.8%<br>12.6% | 276<br>27.1% |
| 2 | 47<br>60.7<br>39.5%<br>9.0%<br>4.6% | 72<br>58.3<br>60.5%<br>14.4%<br>7.1% | 119<br>11.7% |
| 3 | 20<br>38.2<br>26.7%<br>3.8%<br>2.0% | 55<br>36.8<br>73.3%<br>11.0%<br>5.4% | 75<br>7.4% |
| Column Total | 520<br>51.0% | 500<br>49.0% | 1020<br>100.0% |

| Chi-Square | DF | Significance |
|---|---|---|
| 29.36757 | 3 | .00000 |

Intraschool athletic team

| Count / Exp Val / Row Pct / Col Pct / Tot Pct | F | M | Row Total |
|---|---|---|---|
| 0 | 363<br>334.3<br>55.3%<br>70.1%<br>35.7% | 294<br>322.7<br>44.7%<br>58.8%<br>28.9% | 657<br>64.5% |
| 1 | 111<br>125.2<br>45.1%<br>21.4%<br>10.9% | 135<br>120.8<br>54.9%<br>27.0%<br>13.3% | 246<br>24.2% |
| 2 | 37<br>40.7<br>46.3%<br>7.1%<br>3.6% | 43<br>39.3<br>53.8%<br>8.6%<br>4.2% | 80<br>7.9% |
| 3 | 7<br>17.8<br>20.0%<br>1.4%<br>.7% | 28<br>17.2<br>80.0%<br>5.6%<br>2.8% | 35<br>3.4% |
| Column Total | 518<br>50.9% | 500<br>49.1% | 1018<br>100.0% |

| Chi-Square | DF | Significance |
|---|---|---|
| 22.32675 | 3 | .00006 |

School, newspaper magazine, etc.

| Count / Exp Val / Row Pct / Col Pct / Tot Pct | F | M | Row Total |
|---|---|---|---|
| 0 | 336<br>355.0<br>48.2%<br>64.9%<br>33.0% | 361<br>342.0<br>51.8%<br>72.3%<br>35.5% | 697<br>68.5% |
| 1 | 128<br>120.7<br>54.0%<br>24.7%<br>12.6% | 109<br>116.3<br>46.0%<br>21.8%<br>10.7% | 237<br>23.3% |
| 2 | 43<br>31.6<br>69.4%<br>8.3%<br>4.2% | 19<br>30.4<br>30.6%<br>3.8%<br>1.9% | 62<br>6.1% |
| 3 | 11<br>10.7<br>52.4%<br>2.1%<br>1.1% | 10<br>10.3<br>47.6%<br>2.0%<br>1.0% | 21<br>2.1% |
| Column Total | 518<br>50.9% | 499<br>49.1% | 1017<br>100.0% |

| Chi-Square | DF | Significance |
|---|---|---|
| 11.40686 | 3 | .00972 |

Debating/dramatics

| Count / Exp Val / Row Pct / Col Pct / Tot Pct | F | M | Row Total |
|---|---|---|---|
| 0 | 281<br>313.4<br>45.8%<br>54.1%<br>27.7% | 332<br>299.6<br>54.2%<br>66.9%<br>32.7% | 613<br>60.4% |
| 1 | 147<br>130.4<br>57.6%<br>28.3%<br>14.5% | 108<br>124.6<br>42.4%<br>21.8%<br>10.6% | 255<br>25.1% |
| 2 | 67<br>52.2<br>65.7%<br>12.9%<br>6.6% | 35<br>49.8<br>34.3%<br>7.1%<br>3.4% | 102<br>10.0% |
| 3 | 24<br>23.0<br>53.3%<br>4.6%<br>2.4% | 21<br>22.0<br>46.7%<br>4.2%<br>2.1% | 45<br>4.4% |
| Column Total | 519<br>51.1% | 496<br>48.9% | 1015<br>100.0% |

| Chi-Square | DF | Significance |
|---|---|---|
| 19.93604 | 3 | .00018 |

## Extracurricular activities and Gender

Band, orchestra, choir

| Count / Exp Val / Row Pct / Col Pct / Tot Pct | F | M | Row Total |
|---|---|---|---|
| 0 | 364<br>374.5<br>49.5%<br>70.3%<br>35.8% | 372<br>361.5<br>50.5%<br>74.4%<br>36.5% | 736<br>72.3% |
| 1 | 109<br>96.2<br>57.7%<br>21.0%<br>10.7% | 80<br>92.8<br>42.3%<br>16.0%<br>7.9% | 189<br>18.6% |
| 2 | 36<br>30.5<br>60.0%<br>6.9%<br>3.5% | 24<br>29.5<br>40.0%<br>4.8%<br>2.4% | 60<br>5.9% |
| 3 | 9<br>16.8<br>27.3%<br>1.7%<br>.9% | 24<br>16.2<br>72.7%<br>4.8%<br>2.4% | 33<br>3.2% |
| Column Total | 518<br>50.9% | 500<br>49.1% | 1018<br>100.0% |

| Chi-Square | DF | Significance |
|---|---|---|
| 13.44080 | 3 | .00377 |

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| Count / Exp Val / Row Pct / Col Pct / Tot Pct | 1 | 2 | 3 | 4 | Row Total |
|---|---|---|---|---|---|
| 0 | 107<br>97.9<br>47.6%<br>29.8%<br>13.0% | 44<br>52.4<br>19.6%<br>22.9%<br>5.3% | 62<br>61.4<br>27.6%<br>27.6%<br>7.5% | 12<br>13.4<br>5.3%<br>24.5%<br>1.5% | 225<br>27.3% |
| 1 | 27<br>28.7<br>40.9%<br>7.5%<br>3.3% | 17<br>15.4<br>25.8%<br>8.9%<br>2.1% | 16<br>18.0<br>24.2%<br>7.1%<br>1.9% | 6<br>3.9<br>9.1%<br>12.2%<br>.7% | 66<br>8.0% |
| 2 | 26<br>29.6<br>38.2%<br>7.2%<br>3.2% | 18<br>15.8<br>26.5%<br>9.4%<br>2.2% | 23<br>18.5<br>33.8%<br>10.2%<br>2.8% | 1<br>4.0<br>1.5%<br>2.0%<br>.1% | 68<br>8.2% |
| 3 | 19<br>16.5<br>50.0%<br>5.3%<br>2.3% | 5<br>8.8<br>13.2%<br>2.6%<br>.6% | 9<br>10.4<br>23.7%<br>4.0%<br>1.1% | 5<br>2.3<br>13.2%<br>10.2%<br>.6% | 38<br>4.6% |
| 4 | 22<br>27.4<br>34.9%<br>6.1%<br>2.7% | 19<br>14.7<br>30.2%<br>9.9%<br>2.3% | 20<br>17.2<br>31.7%<br>8.9%<br>2.4% | 2<br>3.7<br>3.2%<br>4.1%<br>.2% | 63<br>7.6% |
| 5 | 2<br>3.5<br>25.0%<br>.6%<br>.2% | 2<br>1.9<br>25.0%<br>1.0%<br>.2% | 1<br>2.2<br>12.5%<br>.4%<br>.1% | 3<br>.5<br>37.5%<br>6.1%<br>.4% | 8<br>1.0% |
| Column Total | 359<br>43.5% | 192<br>23.3% | 225<br>27.3% | 49<br>5.9% | 825<br>100.0% |

(Continued)

Page 2 of 2

| Count / Exp Val / Row Pct / Col Pct / Tot Pct | 1 | 2 | 3 | 4 | Row Total |
|---|---|---|---|---|---|
| 6 | 8<br>6.5<br>53.3%<br>2.2%<br>1.0% | 3<br>3.5<br>20.0%<br>1.6%<br>.4% | 2<br>4.1<br>13.3%<br>.9%<br>.2% | 2<br>.9<br>13.3%<br>4.1%<br>.2% | 15<br>1.8% |
| 7 | 5<br>5.2<br>41.7%<br>1.4%<br>.6% | 3<br>2.8<br>25.0%<br>1.6%<br>.4% | 4<br>3.3<br>33.3%<br>1.9%<br>.5% | 0<br>.7<br>.0%<br>.0%<br>.0% | 12<br>1.5% |
| 8 | 143<br>143.6<br>43.3%<br>39.8%<br>17.3% | 81<br>76.8<br>24.5%<br>42.2%<br>9.8% | 88<br>90.0<br>26.7%<br>39.1%<br>10.7% | 18<br>19.6<br>5.5%<br>36.7%<br>2.2% | 330<br>40.0% |
| Column Total | 359<br>43.5% | 192<br>23.3% | 225<br>27.3% | 49<br>5.9% | 825<br>100.0% |

| Chi-Square | DF | Significance |
|---|---|---|
| 36.05174 | 24 | .05426 |

## Parental Agreement/Disagreement with Student Plans and Pathways

| Count / Exp Val / Row Pct / Col Pct / Tot Pct | 1 | 2 | 3 | 4 | Row Total |
|---|---|---|---|---|---|
| 0 | 145<br>139.1<br>45.6%<br>39.6%<br>17.3% | 74<br>72.9<br>23.3%<br>38.5%<br>8.8% | 86<br>87.0<br>27.0%<br>37.6%<br>10.3% | 13<br>19.0<br>4.1%<br>26.0%<br>1.6% | 318<br>38.0% |
| 1 | 89<br>80.5<br>48.4%<br>24.3%<br>10.6% | 50<br>42.2<br>27.2%<br>26.0%<br>6.0% | 33<br>50.3<br>17.9%<br>14.4%<br>3.9% | 12<br>11.0<br>6.5%<br>24.0%<br>1.4% | 184<br>22.0% |
| 2 | 10<br>11.4<br>38.5%<br>2.7%<br>1.2% | 9<br>6.0<br>34.6%<br>4.7%<br>1.1% | 7<br>7.1<br>26.9%<br>3.1%<br>.8% | 0<br>1.6<br>.0%<br>.0%<br>.0% | 26<br>3.1% |
| 3 | 33<br>31.5<br>45.8%<br>9.0%<br>3.9% | 16<br>16.5<br>22.2%<br>8.3%<br>1.9% | 18<br>19.7<br>25.0%<br>7.9%<br>2.2% | 5<br>4.3<br>6.9%<br>10.0%<br>.6% | 72<br>8.6% |
| 4 | 4<br>8.3<br>21.1%<br>1.1%<br>.5% | 3<br>4.4<br>15.8%<br>1.6%<br>.4% | 11<br>5.2<br>57.9%<br>4.8%<br>1.3% | 1<br>1.1<br>5.3%<br>2.0%<br>.1% | 19<br>2.3% |
| 5 | 1<br>2.6<br>16.7%<br>.3%<br>.1% | 1<br>1.4<br>16.7%<br>.5%<br>.1% | 4<br>1.6<br>66.7%<br>1.7%<br>.5% | 0<br>.4<br>.0%<br>.0%<br>.0% | 6<br>.7% |
| Column Total | 366<br>43.7% | 192<br>22.9% | 229<br>27.4% | 50<br>6.0% | 837<br>100.0% |

(Continued)

| Count / Exp Val / Row Pct / Col Pct / Tot Pct | 1 | 2 | 3 | 4 | Row Total |
|---|---|---|---|---|---|
| 6 | 66<br>74.3<br>38.8%<br>18.0%<br>7.9% | 35<br>39.0<br>20.6%<br>18.2%<br>4.2% | 53<br>46.5<br>31.2%<br>23.1%<br>6.3% | 16<br>10.2<br>9.4%<br>32.0%<br>1.9% | 170<br>20.3% |
| 7 | 18<br>18.4<br>42.9%<br>4.9%<br>2.2% | 4<br>9.6<br>9.5%<br>2.1%<br>.5% | 17<br>11.5<br>40.5%<br>7.4%<br>2.0% | 3<br>2.5<br>7.1%<br>6.0%<br>.4% | 42<br>5.0% |
| Column Total | 366<br>43.7% | 192<br>22.9% | 229<br>27.4% | 50<br>6.0% | 837<br>100.0% |

| Chi-Square | DF | Significance |
|---|---|---|
| 39.85598 | 21 | .00774 |

Gender and Pathways

| Count / Exp Val / Row Pct / Col Pct / Tot Pct | Pathways 1 | 2 | 3 | 4 | Row Total |
|---|---|---|---|---|---|
| F | 173 | 146 | 77 | 18 | 414 |
| | 181.2 | 95.7 | 114.4 | 22.8 | 50.6% |
| | 41.8% | 35.3% | 18.6% | 4.3% | |
| | 48.3% | 77.2% | 34.1% | 40.0% | |
| | 21.1% | 17.8% | 9.4% | 2.2% | |
| M | 185 | 43 | 149 | 27 | 404 |
| | 176.8 | 93.3 | 111.6 | 22.2 | 49.4% |
| | 45.8% | 10.6% | 36.9% | 6.7% | |
| | 51.7% | 22.8% | 65.9% | 60.0% | |
| | 22.6% | 5.3% | 18.2% | 3.3% | |
| Column Total | 358 | 189 | 226 | 45 | 818 |
| | 43.8% | 23.1% | 27.6% | 5.5% | 100.0% |

| Chi-Square | DF | Significance |
|---|---|---|
| 81.16244 | 3 | .00000 |

Home Situation and Pathways

| Count / Exp Val / Row Pct / Col Pct / Tot Pct | Pathways 1 | 2 | 3 | 4 | Row Total |
|---|---|---|---|---|---|
| Home situation 0 | 302 | 150 | 179 | 34 | 665 |
| | 291.0 | 152.3 | 181.8 | 39.9 | 79.7% |
| | 45.4% | 22.6% | 26.9% | 5.1% | |
| | 82.7% | 78.5% | 78.5% | 68.0% | |
| | 36.2% | 18.0% | 21.5% | 4.1% | |
| 1 | 8 | 4 | 9 | 5 | 26 |
| | 11.4 | 6.0 | 7.1 | 1.6 | 3.1% |
| | 30.8% | 15.4% | 34.6% | 19.2% | |
| | 2.2% | 2.1% | 3.9% | 10.0% | |
| | 1.0% | .5% | 1.1% | .6% | |
| 2 | 2 | 4 | 4 | 1 | 11 |
| | 4.8 | 2.5 | 3.0 | .7 | 1.3% |
| | 18.2% | 36.4% | 36.4% | 9.1% | |
| | .5% | 2.1% | 1.8% | 2.0% | |
| | .2% | .5% | .5% | .1% | |
| 3 | 43 | 29 | 16 | 9 | 97 |
| | 42.5 | 22.2 | 26.5 | 5.8 | 11.6% |
| | 44.3% | 29.9% | 16.5% | 9.3% | |
| | 11.8% | 15.2% | 7.0% | 18.0% | |
| | 5.2% | 3.5% | 1.9% | 1.1% | |
| 4 | 10 | 4 | 20 | 1 | 35 |
| | 15.3 | 8.0 | 9.6 | 2.1 | 4.2% |
| | 28.6% | 11.4% | 57.1% | 2.9% | |
| | 2.7% | 2.1% | 8.8% | 2.0% | |
| | 1.2% | .5% | 2.4% | .1% | |
| Column Total | 365 | 191 | 228 | 50 | 834 |
| | 43.8% | 22.9% | 27.3% | 6.0% | 100.0% |

| Chi-Square | DF | Significance |
|---|---|---|
| 37.92020 | 12 | .00016 |

Home Situation and Gender

| Count / Exp Val / Row Pct / Col Pct / Tot Pct | F | M | Row Total |
|---|---|---|---|
| 0 | 417 | 394 | 811 |
| | 413.9 | 397.1 | 79.9% |
| | 51.4% | 48.6% | |
| | 80.5% | 79.3% | |
| | 41.1% | 38.8% | |
| 1 | 18 | 13 | 31 |
| | 15.8 | 15.2 | 3.1% |
| | 58.1% | 41.9% | |
| | 3.5% | 2.6% | |
| | 1.8% | 1.3% | |
| 2 | 6 | 7 | 13 |
| | 6.6 | 6.4 | 1.3% |
| | 46.2% | 53.8% | |
| | 1.2% | 1.4% | |
| | .6% | .7% | |
| 3 | 66 | 49 | 115 |
| | 58.7 | 56.3 | 11.3% |
| | 57.4% | 42.6% | |
| | 12.7% | 9.9% | |
| | 6.5% | 4.8% | |
| 4 | 11 | 34 | 45 |
| | 23.0 | 22.0 | 4.4% |
| | 24.4% | 75.6% | |
| | 2.1% | 6.8% | |
| | 1.1% | 3.3% | |
| Column Total | 518 | 497 | 1015 |
| | 51.0% | 49.0% | 100.0% |

| Chi-Square | DF | Significance |
|---|---|---|
| 15.37635 | 4 | .00398 |